

WELCOME TO TECHNICAL ORDER 00-105E-9, 1 JULY 2004, REVISION 9.

THIS IS SEGMENT 3 COVERING CHAPTER 5.

TO NAVIGATE

CLICK ON THE
BOOKMARKS AND
CLICK ON THE (+)
SYMBOLS, THEN
CLICK ON SUBJECT
LINKS TO GO TO
SPECIFIC VIEWS
IN THIS SEGMENT.



CONTINUE

NOTICE

CONTACT

**TO GO DIRECTLY TO THE TECHNICAL ORDER,
CLICK ON THE CONTINUE BUTTON.**

**TO SEE THE SEGMENT INFORMATION CHANGE NOTICE,
CLICK ON THE NOTICE BUTTON.**



**TO CONTACT THE TECHNICAL CONTENT MANAGER ,
CLICK ON THE CONTACT BUTTON.**

TECHNICAL ORDER 00-105E-9 TECHNICAL CONTENT MANAGER

WRITTEN CORRESPONDENCE:

HQ AFCESA/CEXF

ATTN: Fire and Emergency Services Egress Manager
139 Barnes Drive Suite 1
Tyndall AFB, Florida 32403-5319



E-MAIL: Tom.Stemphoski@tyndall.af.mil

INTERNET: HQ AFCESA Fire and Emergency Services PUBLIC WEB PAGE:
<http://www.afcesa.af.mil/CEX/fire/index.asp>

PHONE: (850) 283-6150
DSN 523-6150

FAX: (850) 283-6390
DSN 523-6390

For technical order improvements, correcting procedures, and other inquiries, please use the above media most convenient.

SEGMENT 3 INFORMATION CHANGE NOTICE

This page is provided to notify the user of any informational changes made to Technical Order 00-105E-9 in this Segment and the current Revision. Informational changes will be referenced in the Adobe Reader's Bookmark tool as a designator symbol illustrated as a <[C]> for quick reference to the right of the affected aircraft. The user shall insure the most current information contained in this TO is used for his operation. Retaining out of date rescue information can negatively affect the user's operability and outcome of emergencies. If the user prints out pages his unit requires, the user shall print the affected page(s), remove and destroy the existing page(s), and insert the newly printed page(s) in the binder provided for that purpose. A Master of this TO shall be retained in the unit's library for reference, future printing requirements and inspections.

<u>CHAPTER</u>	<u>AIRCRAFT</u>	<u>PAGE</u>	<u>EXPLANATION OF CHANGE</u>
5	All	All	New Segment designation due to size limitation for downloading.

NOTE

Chapter 5 contains emergency rescue and mishap response information for the following aircraft:

USAF
USAF
USAF

B-1
B-2
B-52

CHAPTER 5

U.S. AIR FORCE

BOMBER

AEROSPACE EMERGENCY RESCUE AND MISHAP RESPONSE INFORMATION

5-1. INTRODUCTION AND USE.

5-2. This section contains emergency rescue and mishap response information illustrations in alpha-numerical order relative to type and model of aircraft. This arrangement of illustrations is maintained from Chapter 4 throughout the remainder of the publication.

5-3. GENERAL ARRANGEMENT.

5-4. Aircraft type designation has been positioned in the upper right corner of the horizontal illustration for rapid identification. Additional aids to rapid orientation are:

a. Recent technological advances in aviation have caused concern for the modern firefighter. Aircraft hazards, cabin configurations, airframe materials, and any other information that would be helpful in fighting fires, the locating and rescue of personnel will be added as the information becomes available.

b. Suggested special tools/equipment are listed in the upper left corner, on the Aircraft/Entry page of each listed aircraft.

c. Procedural steps covering emergency/normal entrances, cut-ins, engine/APU shutdown, safetying ejection/escape systems, and aircrew extraction are outlined on the left side of each page with coordinated illustrations on the right.

d. Illustrations located on right side of pages are coordinated with text by numerals and small letters depicting both paragraph and subparagraph on the page.

e. Each illustration is consistently colored and/or pattern keyed to highlight essential emergency rescue information.

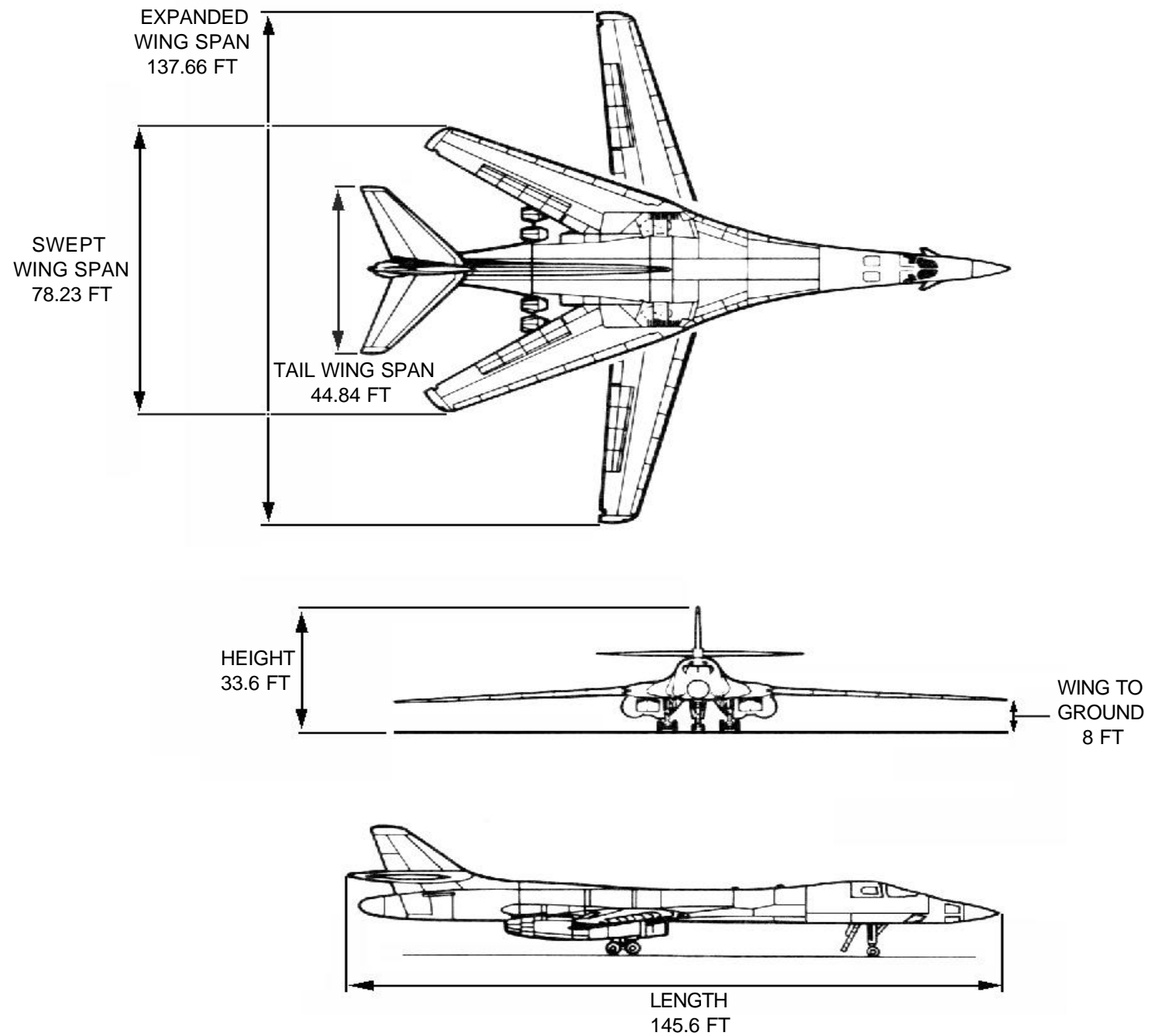
f. Details are pulled directly from the illustration to highlight an area, thus eliminating unnecessary searching for desired information.

AIRCRAFT PAINT SCHEME

B-1



AIRCRAFT DIMENSIONS



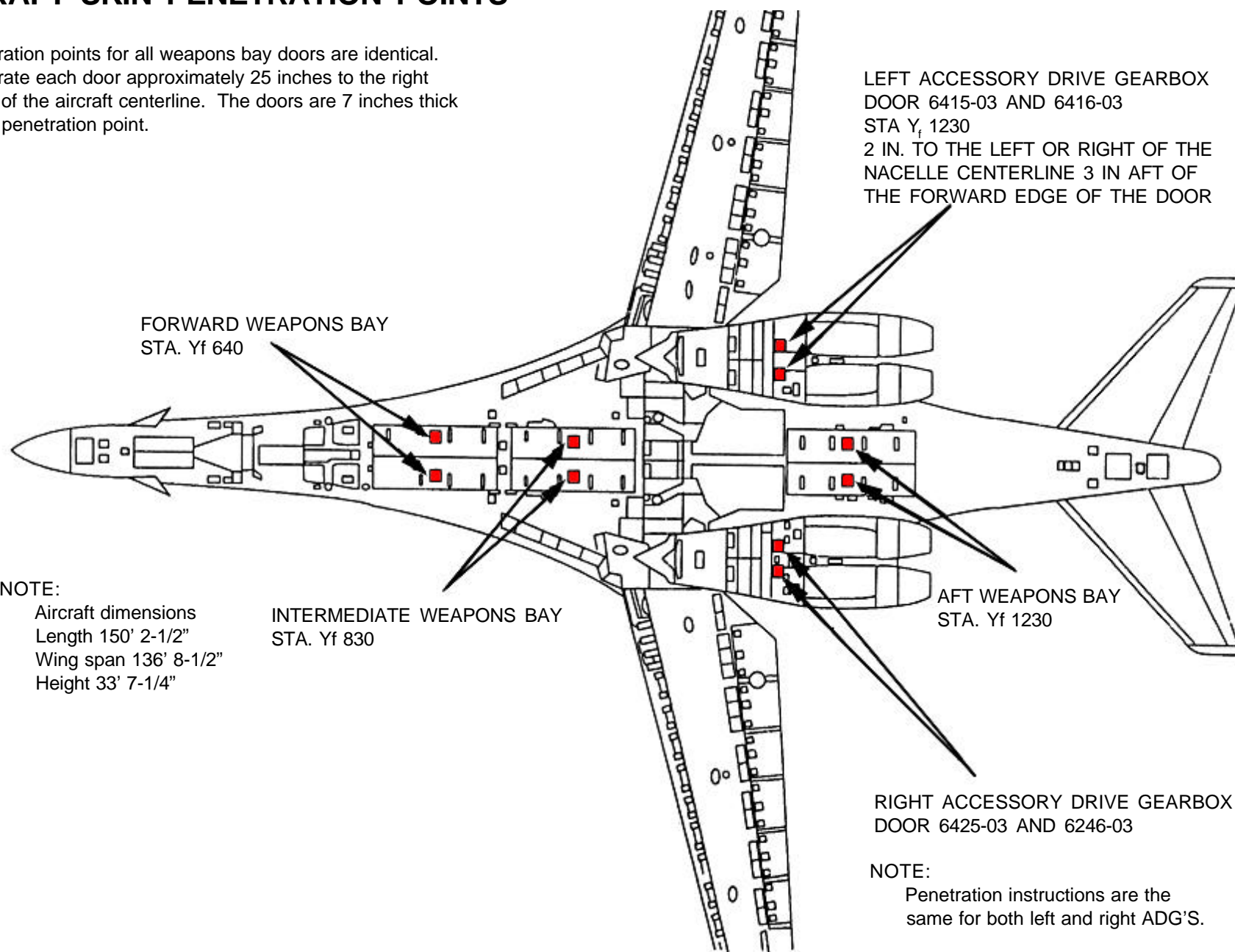
B-1.3 AIRCRAFT SKIN PENETRATION POINTS

B-1

TO 00-105E-9

NOTE:

Penetration points for all weapons bay doors are identical. Penetrate each door approximately 25 inches to the right or left of the aircraft centerline. The doors are 7 inches thick at the penetration point.



NOTE:

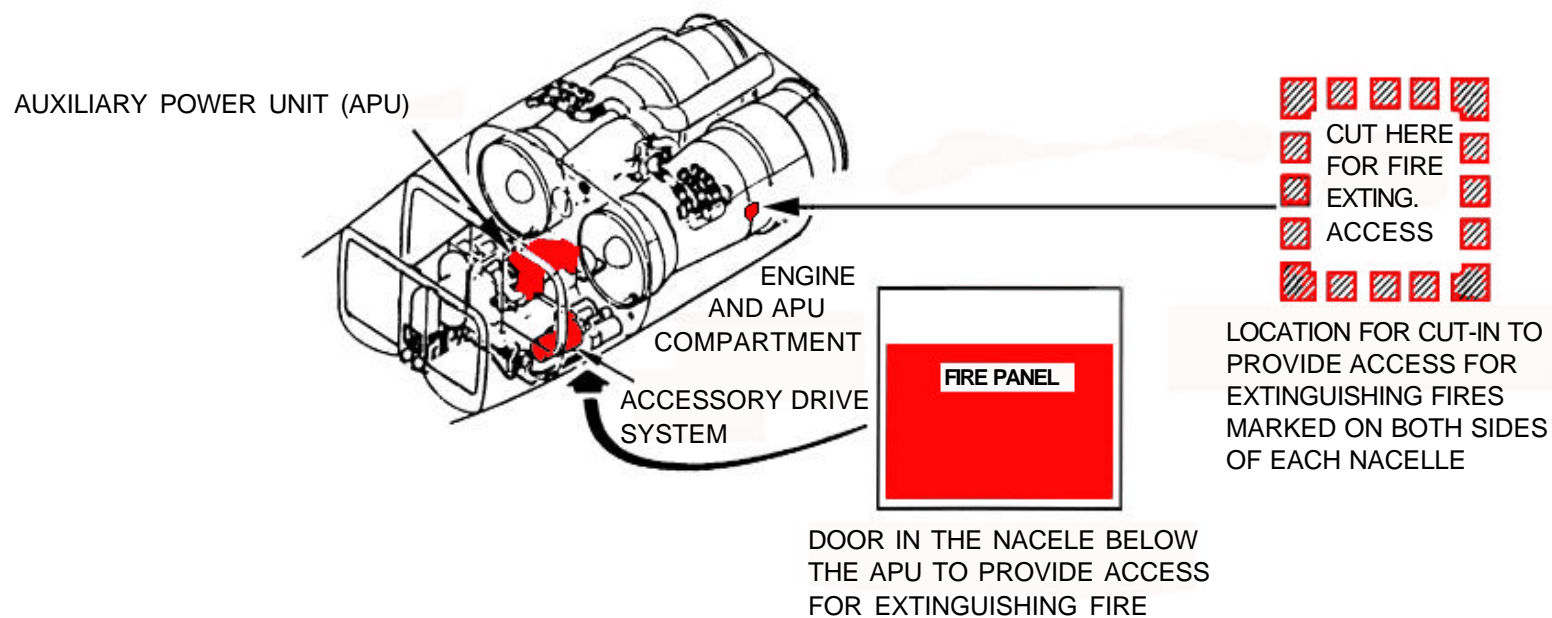
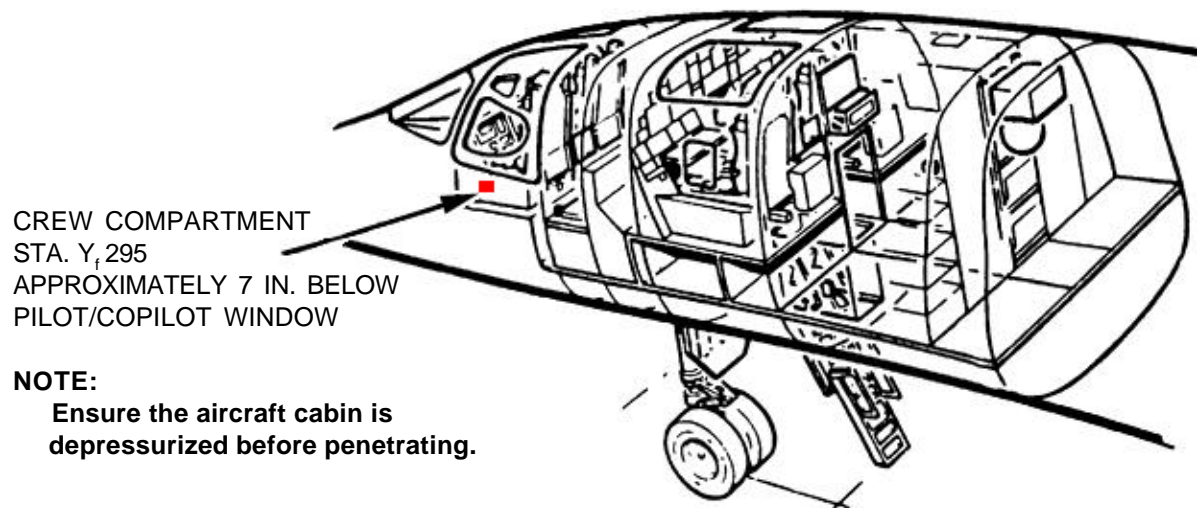
Aircraft dimensions
Length 150' 2-1/2"
Wing span 136' 8-1/2"
Height 33' 7-1/4"

NOTE:

Penetration instructions are the same for both left and right ADG'S.

AIRCRAFT SKIN PENETRATION POINTS - Continued

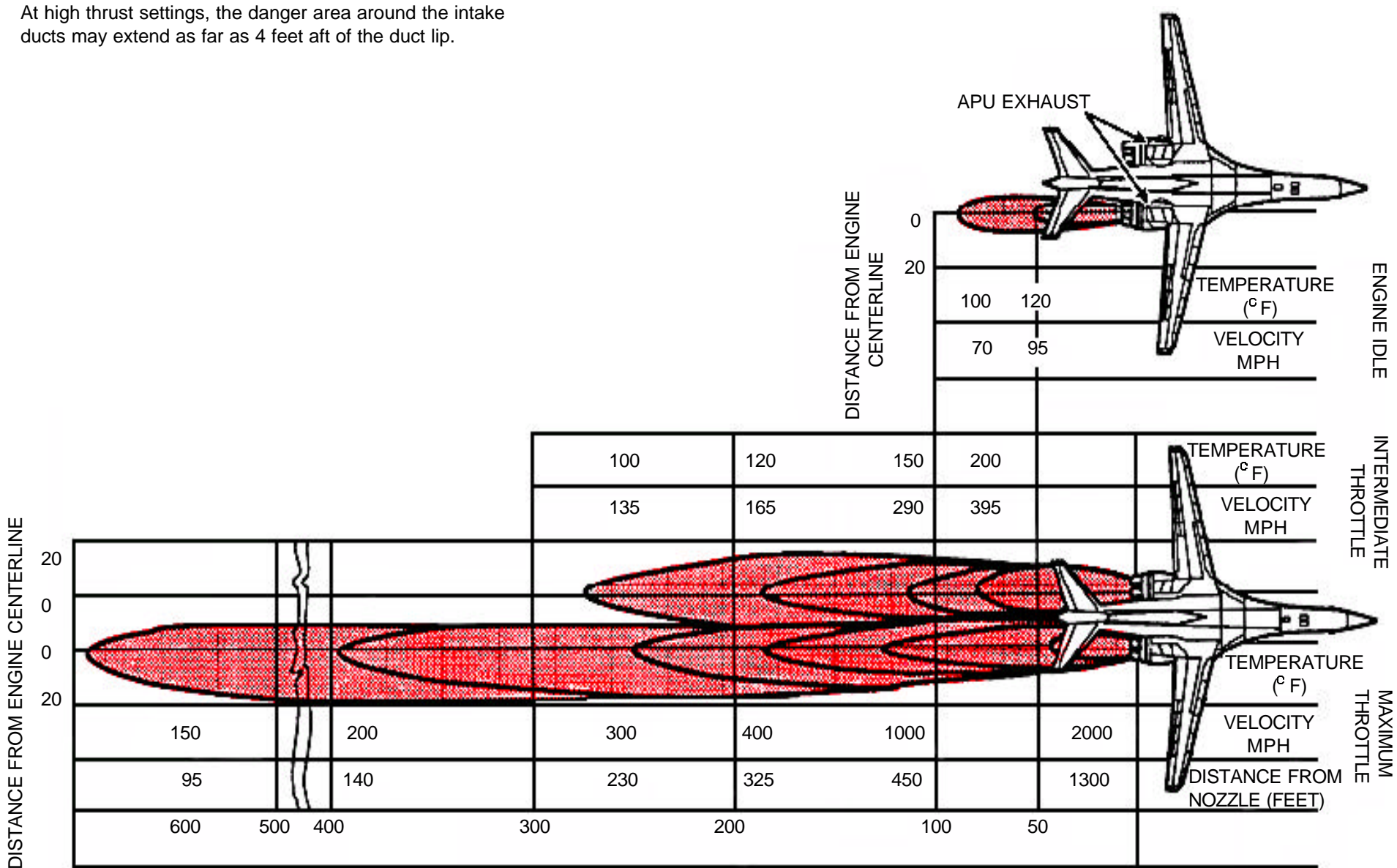
B-1



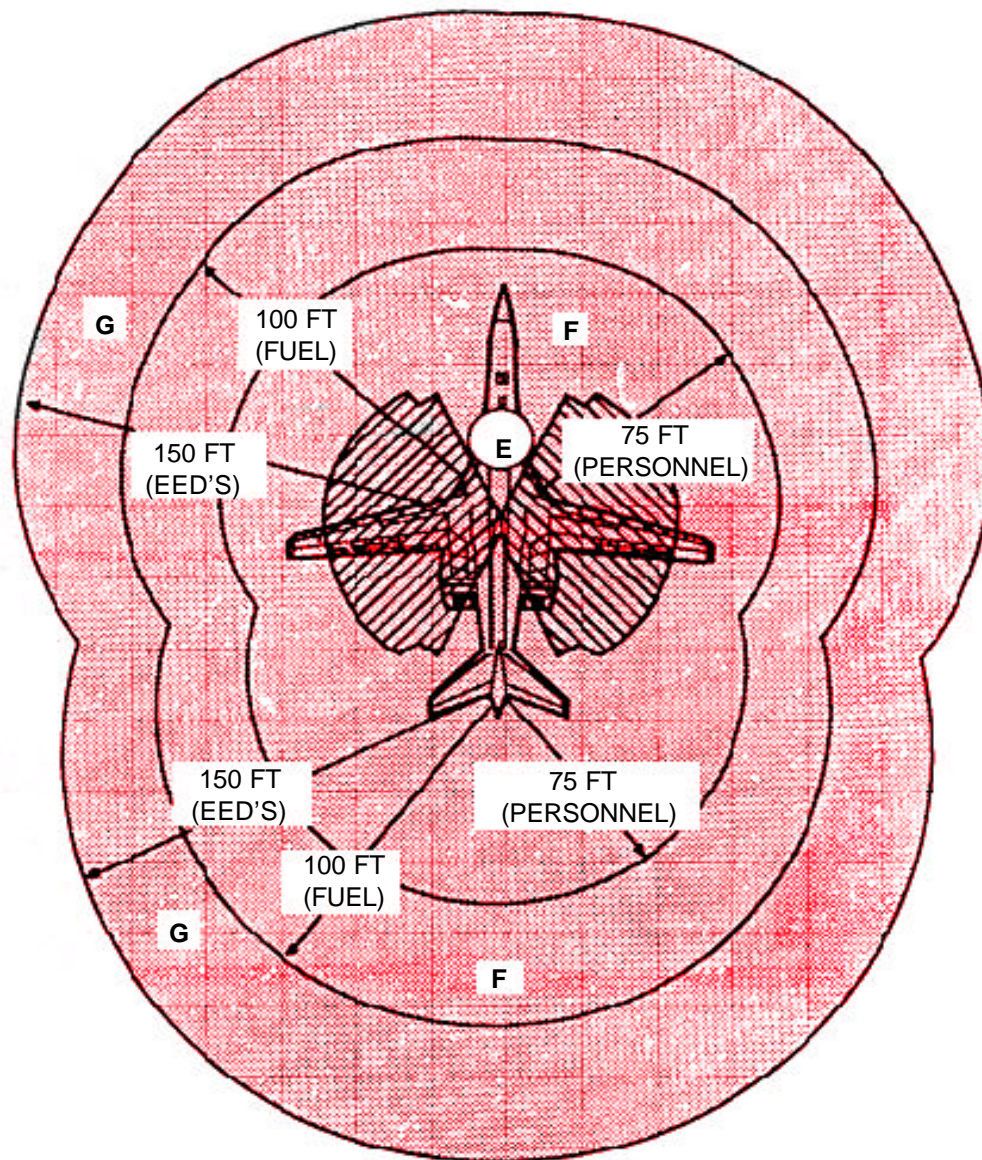
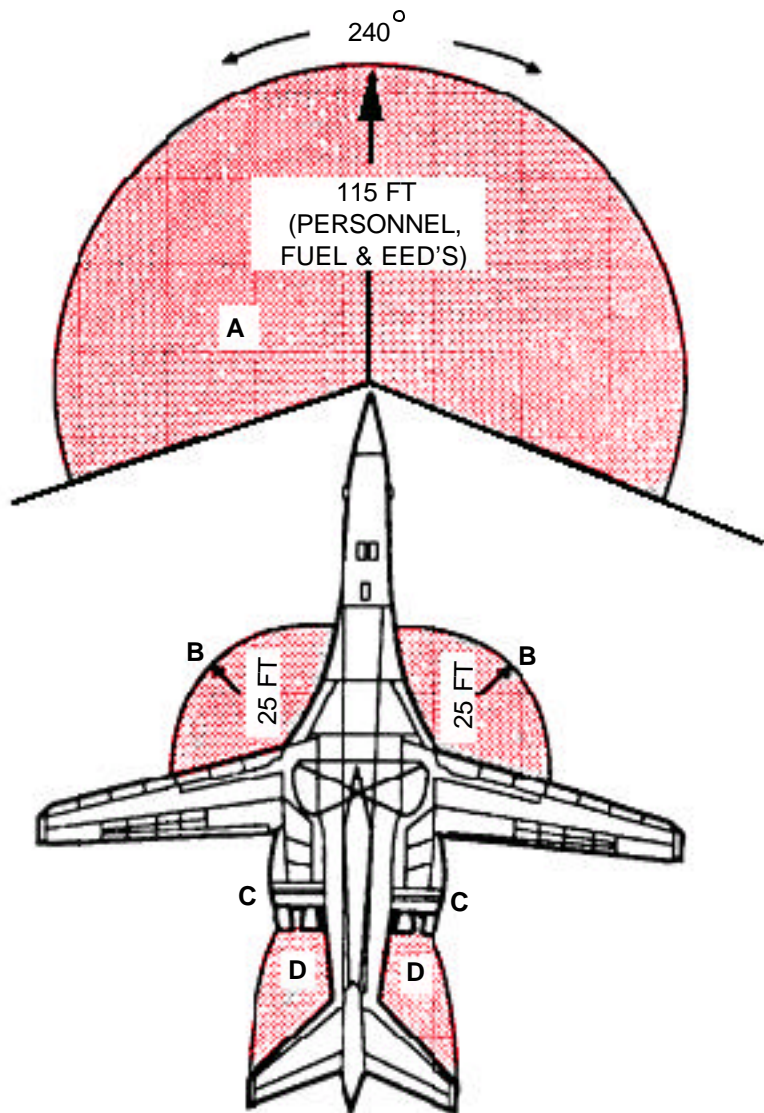
AIRCRAFT HAZARD INFORMATION

WARNING

At high thrust settings, the danger area around the intake ducts may extend as far as 4 feet aft of the duct lip.



AIRCRAFT HAZARD INFORMATION - Continued



KEY:

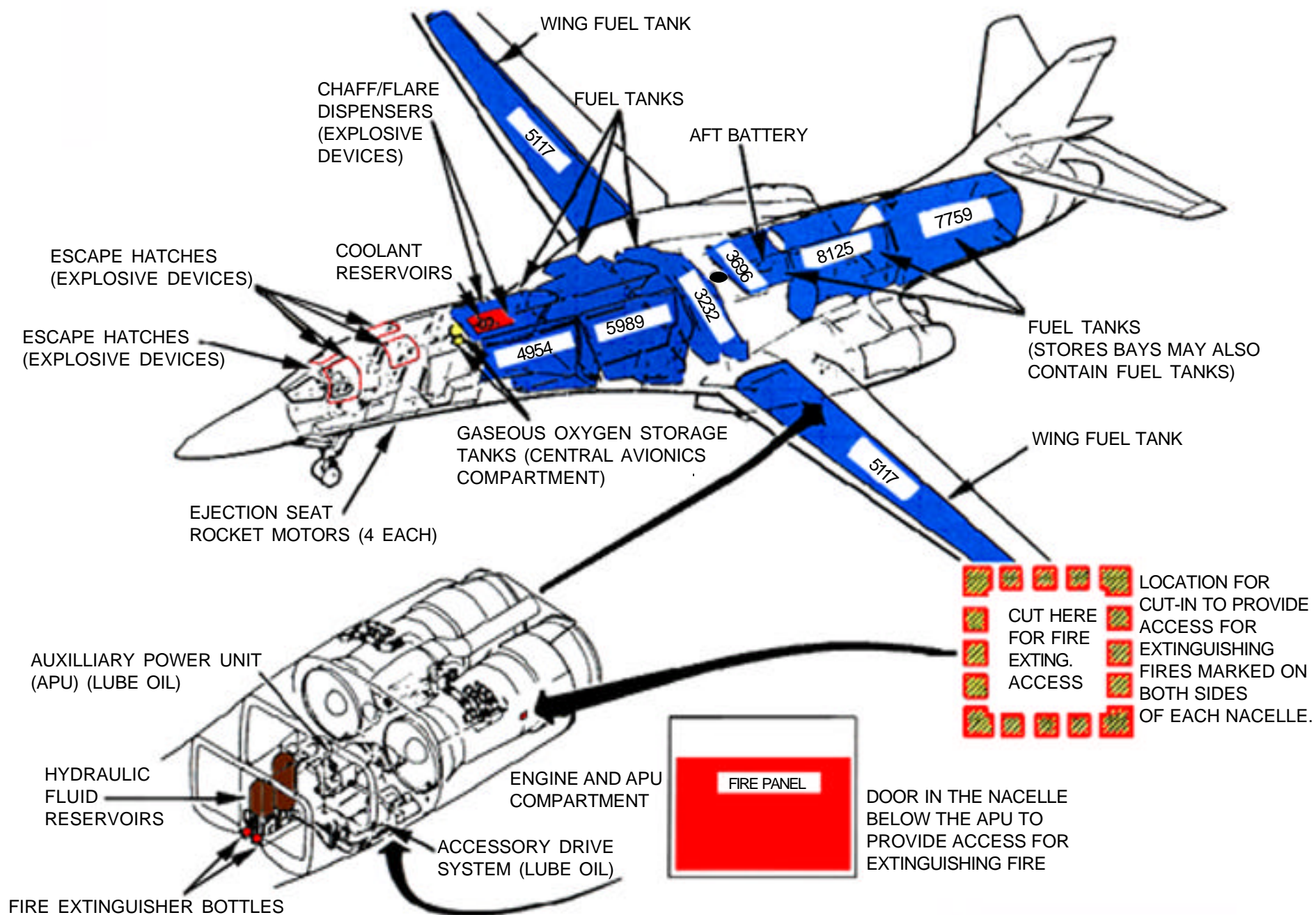
- A - RADAR
- B - ENGINE INTAKES
- C - ROTATING PLANES OF ENGINE TURBINES
- D - ENGINE EXHAUST
- E - DOPPLER RADAR
- F - DEFENSE RADAR
- G - DEFENSE RADAR AND HF RADIO

TIRE AVOIDANCE:

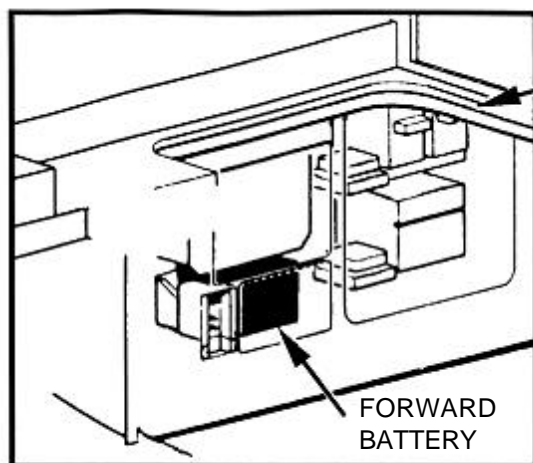
AT ANY TIME IT IS SUSPECTED THAT THE WHEEL OR TIRE IS HOT, APPROACH THE WHEEL FROM THE FRONT OR REAR ONLY. A LANDING USING MAXIMUM BRAKING WILL GENERATE HIGH TEMPERATURES. AVOID THIS AREA FOR 45 TO 60 MINUTES AFTER AIRCRAFT HAS STOPPED.

AIRCRAFT HAZARD INFORMATION - Continued

B-1

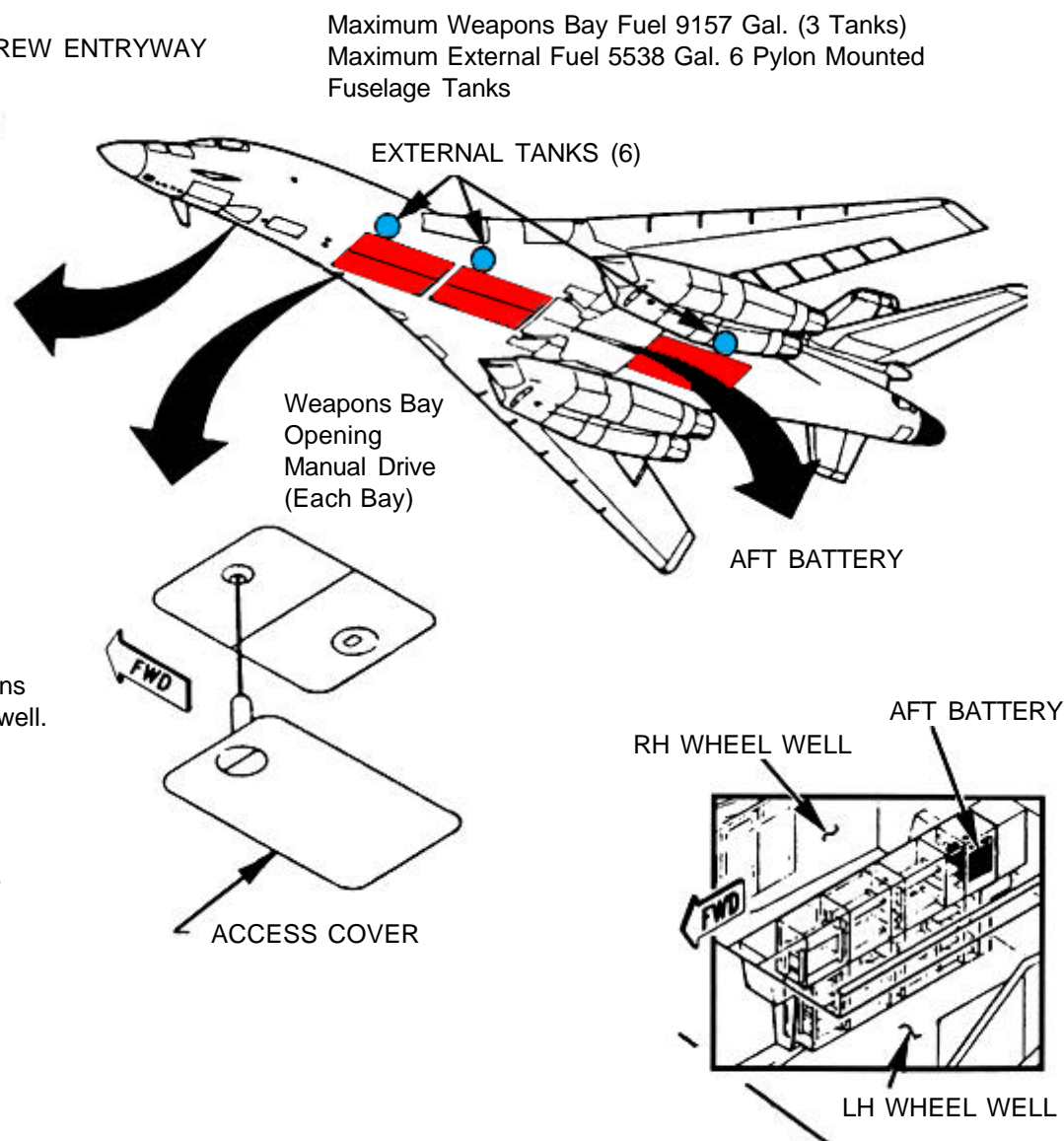


AIRCRAFT HAZARD INFORMATION - Continued



NOTE:

- Battery locations are being modified. Aircraft number 2-18 off assembly line have battery locations as follows: Forward battery is located in the crew entry stairwell. Aft battery is located in the aft left wheel well.
- Aircraft number 19-100 off assembly line have battery locations as follows: Forward battery is located in the crew entry stairwell. Aft battery is located in the left forward nose.
- Modification to aircraft 2-18 to move the aft battery from left rear wheelwell to left forward nose location associated with aircraft 19-100 will tentatively be completed in January 1992.

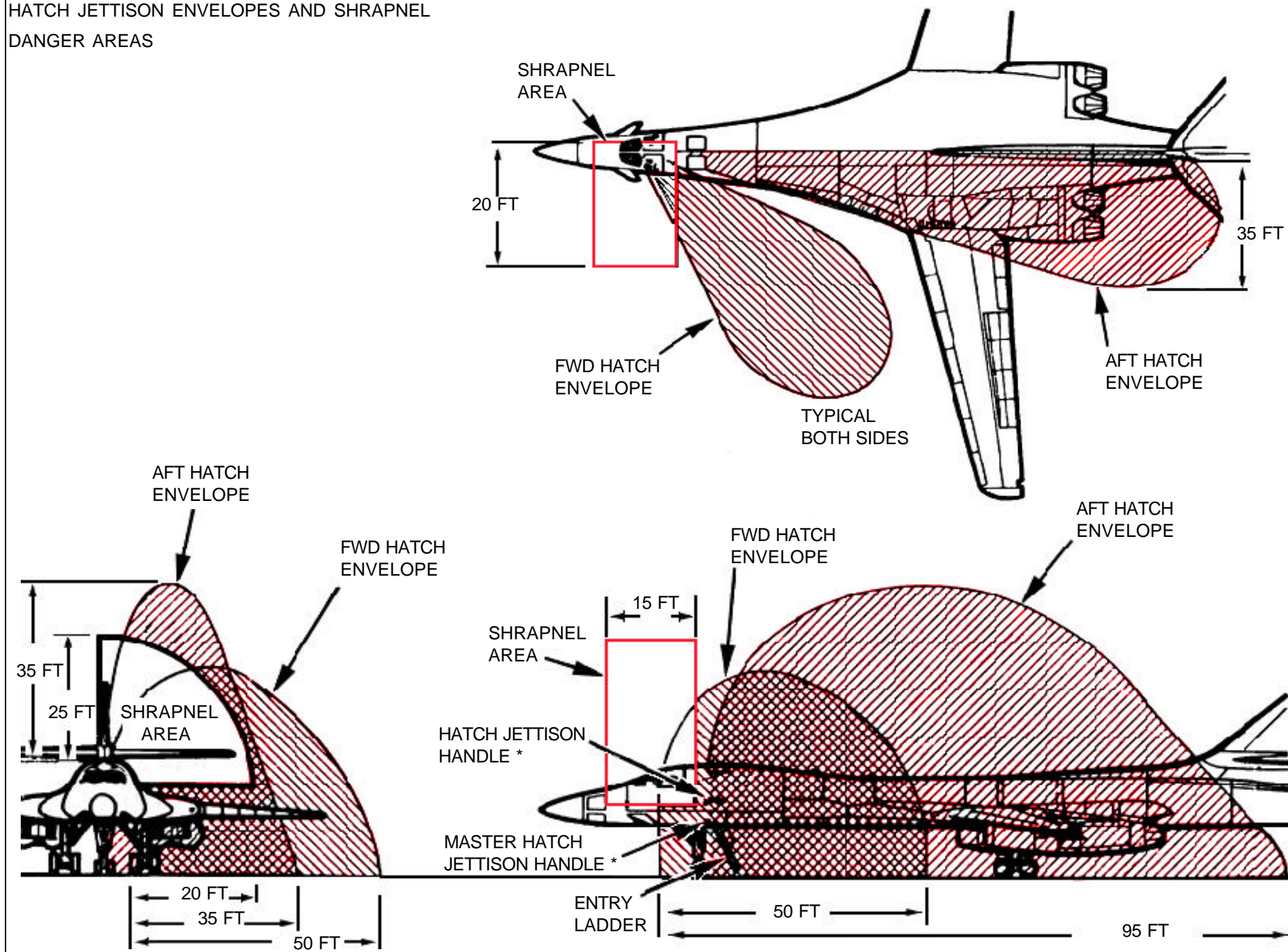


AIRCRAFT HAZARD INFORMATION - Continued

HATCH JETTISON ENVELOPES AND SHRAPNEL

DANGER AREAS

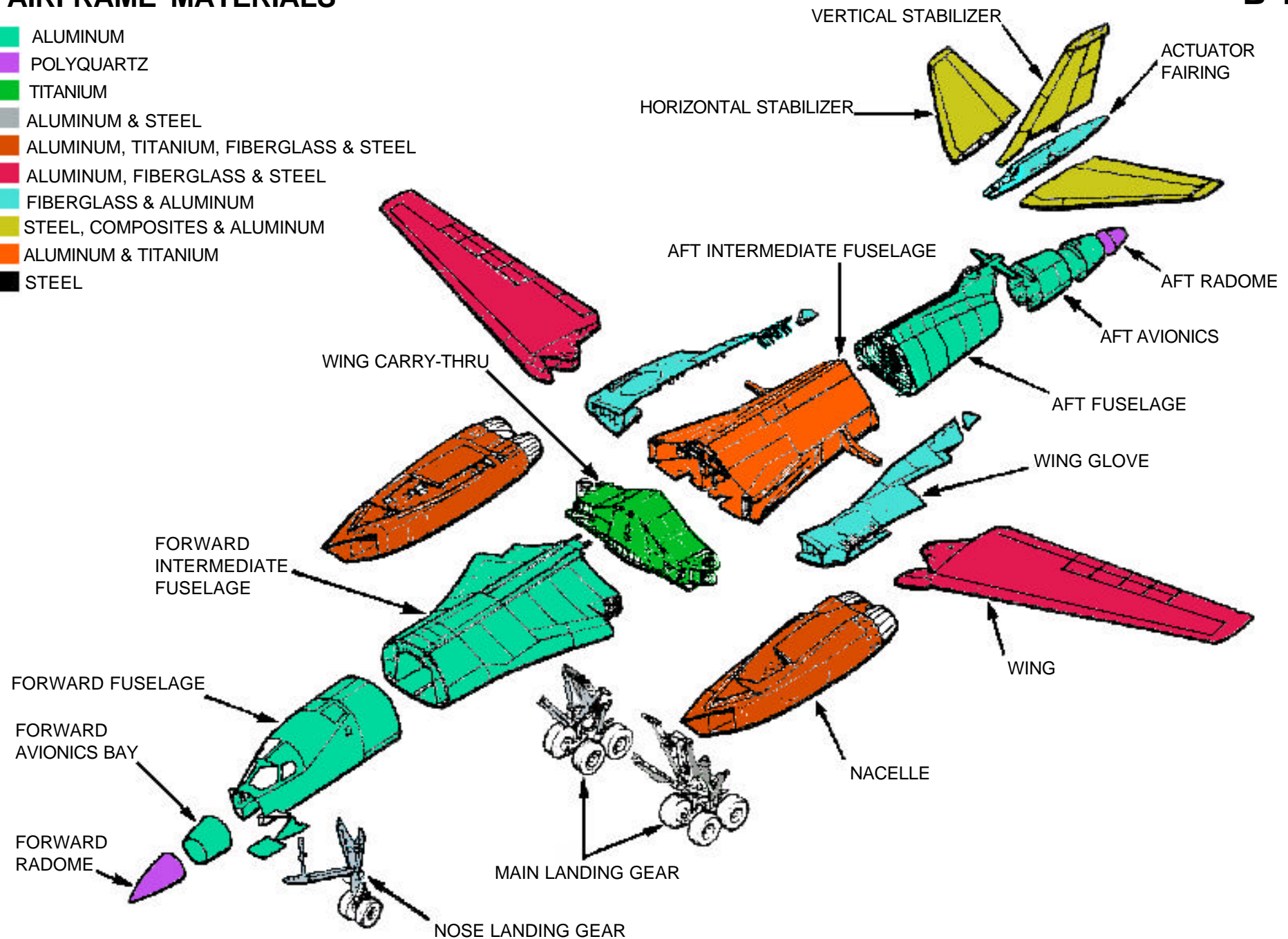
B-1



AIRFRAME MATERIALS

B-1

- ALUMINUM
- POLYQUARTZ
- TITANIUM
- ALUMINUM & STEEL
- ALUMINUM, TITANIUM, FIBERGLASS & STEEL
- ALUMINUM, FIBERGLASS & STEEL
- FIBERGLASS & ALUMINUM
- STEEL, COMPOSITES & ALUMINUM
- ALUMINUM & TITANIUM
- STEEL



SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw

24 Ft. Ladder

3/8 in. Dr. Ratchet With Ext.

Or 3/8 in. Dr. Speed Wrench

Fire Drill II

AIRCRAFT ENTRY

1. NORMAL ENTRY

WARNING

Ensure all personnel and equipment are clear of entry ladder before extending ladder.

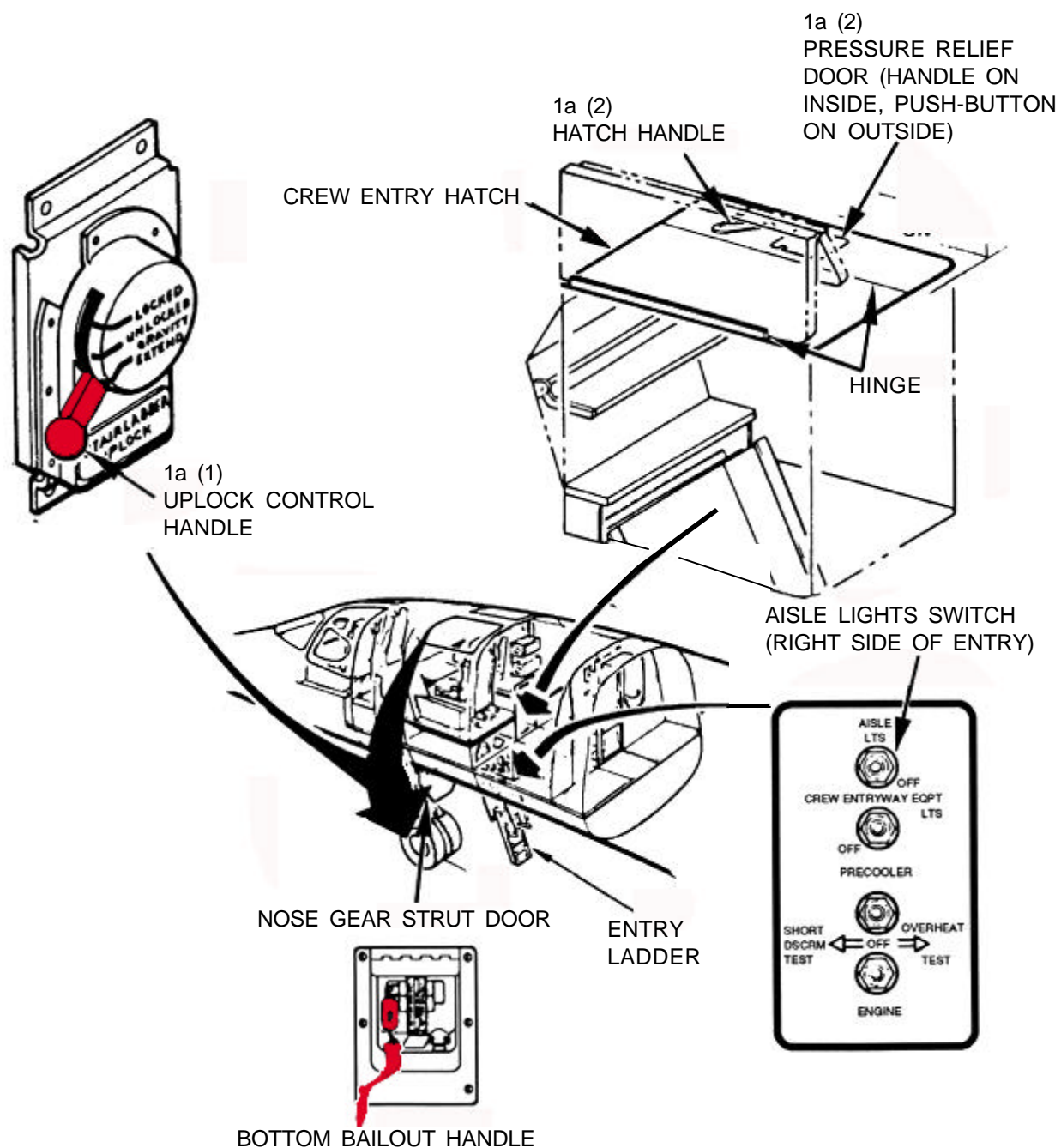
a. Gravity extension of crew entry ladder:

- (1) Move ladder uplock control handle, located on nose gear strut door, to "UNLOCKED", then move handle to "GRAVITY EXTEND", and hold until ladder is fully extended. (Complete ladder extension requires approx. 10 seconds).

WARNING

The bottom bailout handle which jettisons the ladder and external hatch, located in the central aisle aft of the forward instructor position, is armed when the crew entry hatch is open (inner hatch).

- (2) Climb ladder to crew entry hatch, depress push-button on pressure relief door in hatch and open door. Turn handle, wait 5 seconds to allow door seal to deflate. Grasp hatch handle and move to "OPEN", and raise hatch.



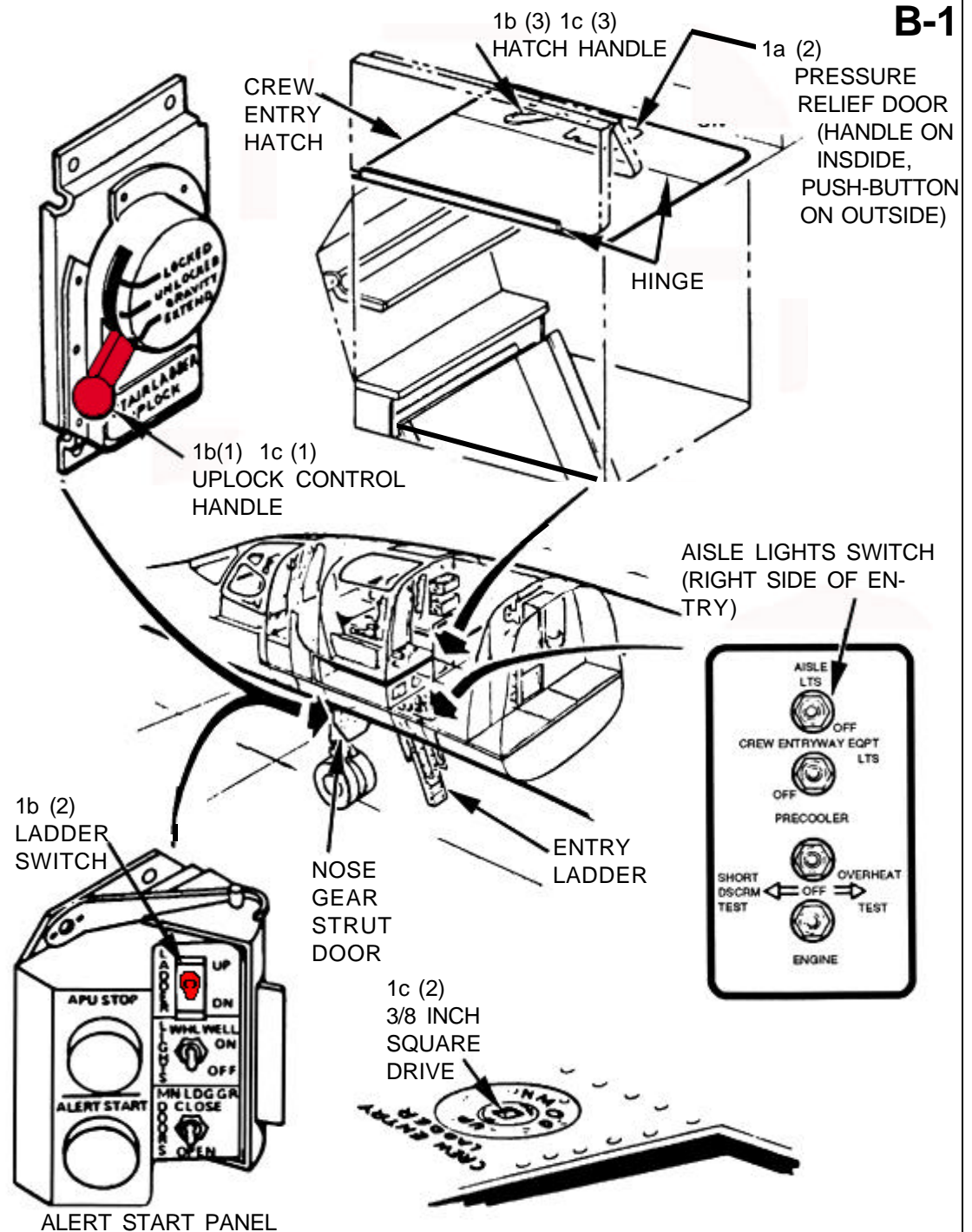
AIRCRAFT ENTRY - Continued

b. Electrical extension of crew entry ladder:

- (1) Move ladder uplock control handle, located on nose gear strut door, to "UNLOCKED", and hold.
- (2) Place ladder switch, located nose gear strut door, to "DOWN" (momentarily); Release control handle as soon as ladder starts to move. (Complete ladder extension requires approx. 25 seconds).
- (3) Climb ladder to crew entry hatch, depress pushbutton on pressure relief door in hatch and open door. Turn handle, wait 5 seconds to allow door seal pressure to dump and close seal to deflate. Grasp hatch handle and move to "OPEN", and raise hatch.

c. Manual extension of crew entry ladder:

- (1) Move uplock control handle, located on nose gear strut door, to "UNLOCKED" and hold.
- (2) Insert a 3/8 in. dr. speed wrench or ratchet with extension in manual cranking receptacle. Release uplock handle when ladder starts to move. (Approx. 100 turns are require to fully extend ladder).
- (3) Climb ladder to crew entry hatch, depress push-button on pressure relief door in hatch and open door. Turn handle, wait 5 seconds to allow door seal pressure to dump and close seal to deflate. Grasp handle and move to "OPEN", and raise hatch.



B-1

AIRCRAFT ENTRY-Continued

B-1

2. EMERGENCY ENTRY

WARNING

Serious injury to personnel and extensive damage to the airframe could result when emergency escape hatches are jettisoned. Use emergency entry methods only when time and conditions warrant for the safety of the aircrew.

NOTE:

- Pulling the master hatch jettison handle will jettison forward and aft escape hatches on BOTH sides of the aircraft.
- Pulling the hatch jettison handle on the right side of the aircraft will jettison the forward and aft escape hatches on the right side ONLY. Pulling the hatch jettison handle on the left side of the aircraft will jettison the forward and aft escape hatches on the left side ONLY.

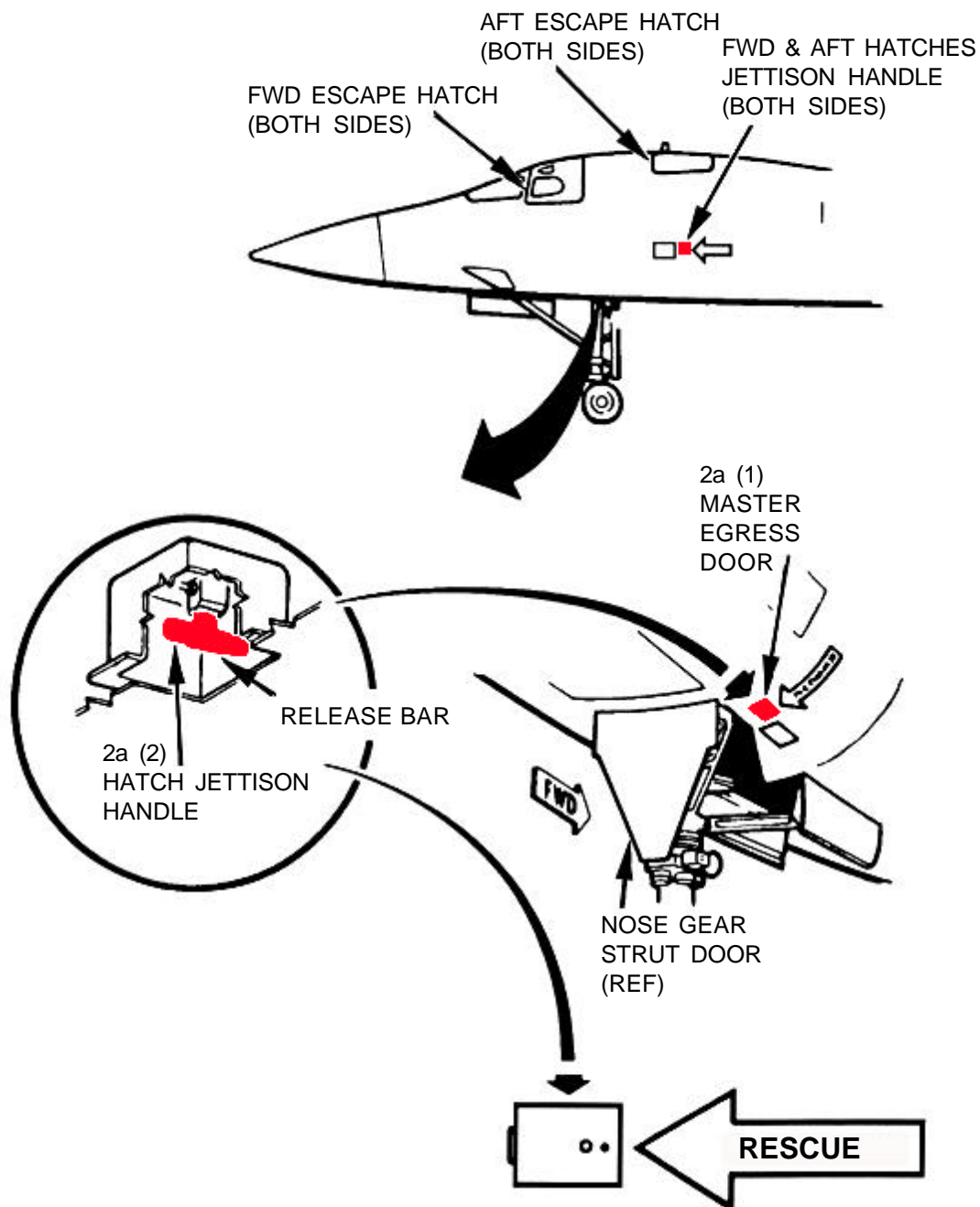
a. Emergency entry (gear down):

- (1) Open master hatch jettison door, located on the lower right side of the fuselage adjacent to nose gear, and press hatch jettison handle release bar.

WARNING

Face away from the aircraft and shield body (if possible) from the debris as hatches are jettisoned. Fragments could cause serious injury to personnel.

- (2) Pull hatch jettison handle to escape hatches (4).



AIRCRAFT ENTRY-Continued AND ENGINE SHUTDOWN

b. Emergency entry (gear up):

NOTE:

On gear up landings, the master hatch jettison handle will be inaccessible. Use hatch jettison handles on left and right sides of aircraft.

- (1) Open hatch jettison handle door, located on both sides of the lower fuselage below aft escape hatch, and push hatch jettison handle release bar.

WARNING

Face away from the aircraft and shield body (if possible) from debris as the hatches are jettisoned. Fragments could cause serious injury to personnel.

- (2) Pull hatch jettison handle(s) to jettison escape hatches.

3. CUT-IN

a. Cut through the largest glass area available.

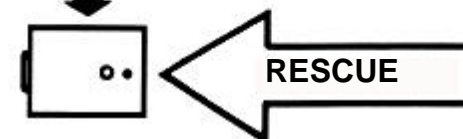
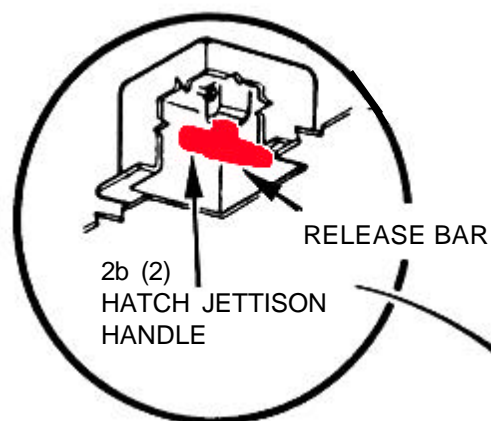
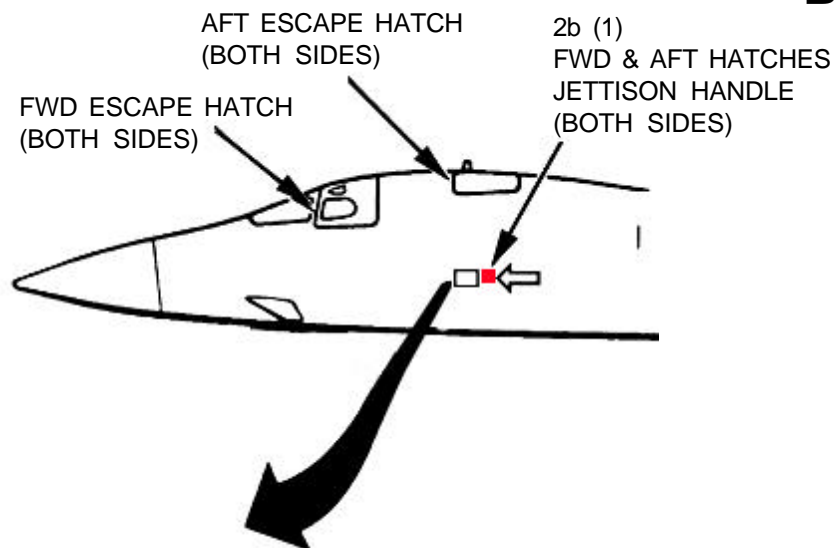
ENGINE SHUTDOWN

WARNING

When emergency aircraft shutdown needs accomplishing and the Emergency Generator Switch is not shut off and is left in either the "ON" or "AUTOMATIC" position, the engines will throttle/line down then the aircraft computer will automatically throttle the engines back to idle!!!

NOTE:

The last engine shutdown must be driving an operable generator. AC power is required for engine shutdown using Engine Start Switches.



ENGINE SHUTDOWN-Continued

1. EMERGENCY APU SHUTDOWN

NOTE:

If emergency is fire related, APU shutdown will be automatically initiated. Affected APU/ENGINE fire switchlight will illuminate. It will be necessary for operator to arm and initiate fire extinguishing agent discharge.

- a. On FIRE WARNING and EXTINGUISHER panel, momentarily depress applicable illuminated switchlight.
APU FIRE
ENG FIRE

- b. Set applicable AGENT DISCH switch to MAIN.

NOTE:

If APU fire warning switchlight goes out within 30 seconds, omit step 1c.

- c. Set applicable AGENT DISCH switch to RES.

NOTE:

In case of engine or APU fire, engine and APU fire pushbuttons must be pressed before turning aircraft battery "OFF".

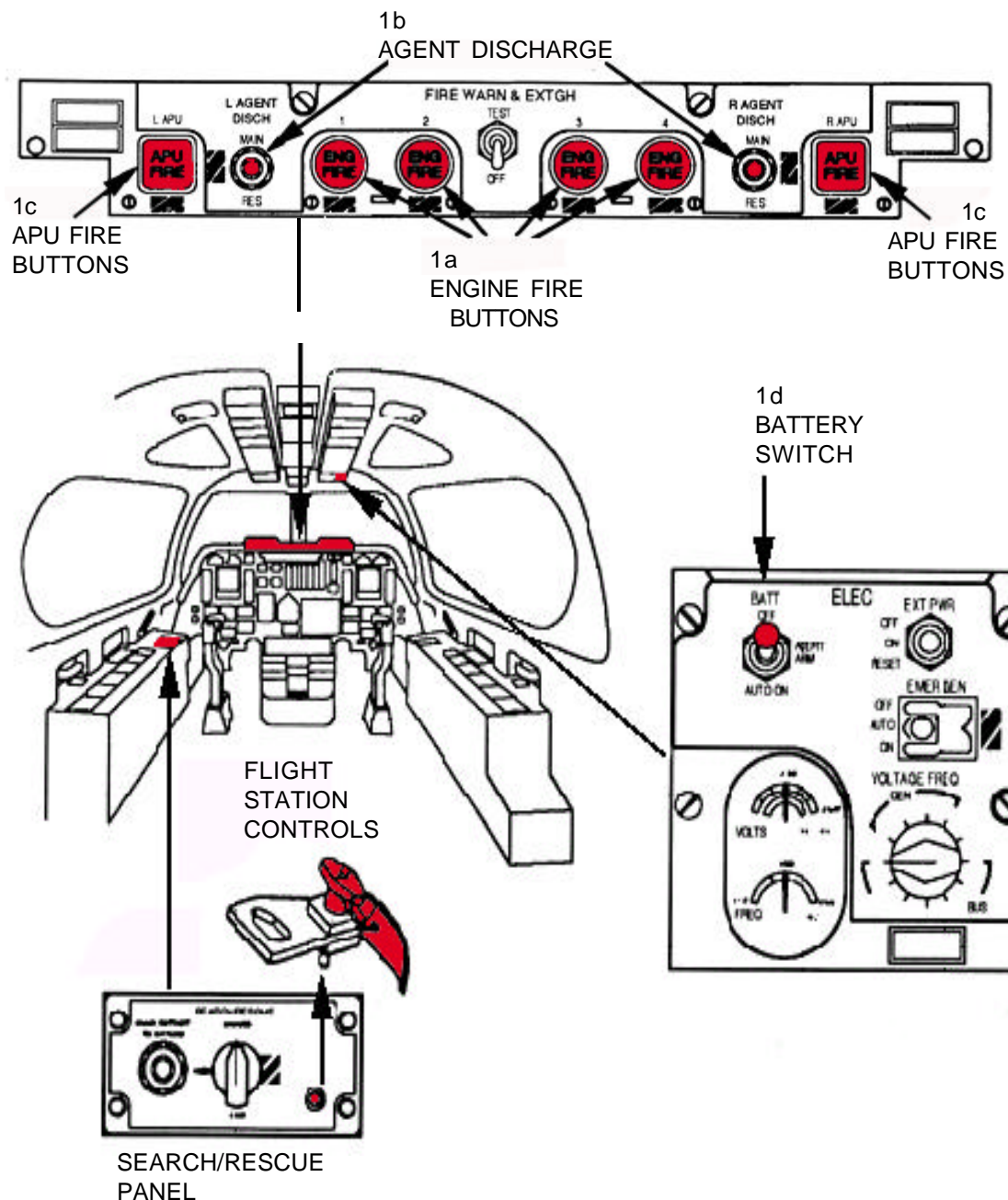
CAUTION

Use the engine/APU fire suppression system only if fire is indicated. Press applicable engine/APU fire pushbutton and wait 5 seconds to allow time for firewall fuel valves to close. Then turn battery switch to "OFF".

- d. Set BATTERY switch to OFF and evacuate aircraft.

NOTE:

- An APU stop switch is also located on the "ALERT START" panel on the nose gear strut door.
- On production B-1B aircraft the "SEARCH/RESCUE" panel is not installed.
- On prototype B-1 aircraft do not press "MAN DEPLOY" button, located on the search/rescue panel on the left overhead console, when selector switch is pointed toward "MAN DEPLOY" position.



ENGINE SHUTDOWN-Continued

2. EMERGENCY ENGINE SHUTDOWN

- a. Set Emergency Generator Switch to OFF.

NOTE:

If left on, in some circumstances, engine #3 or #4 may restart.

- b. Set Engine 4, 3, 2, 1 Start Switches to OFF.

NOTE:

The last engine shutdown must be driving an operable generator. AC power is required for engine shutdown using engine start switches. Do not set engine #3 start switch last; it has no generator!!!

- c. Set APU Mode Switches (TWO) to OFF position.

- d. Depress the engine and APU Fire Pushbuttons.

NOTE:

Depress one fire pushbutton at a time on each side of the Fire Warning and Extinguishing panel. Wait one second and depress the second fire pushbutton. Wait another second before depressing the third pushbutton, and so on until all six buttons have been pushed.

WARNING

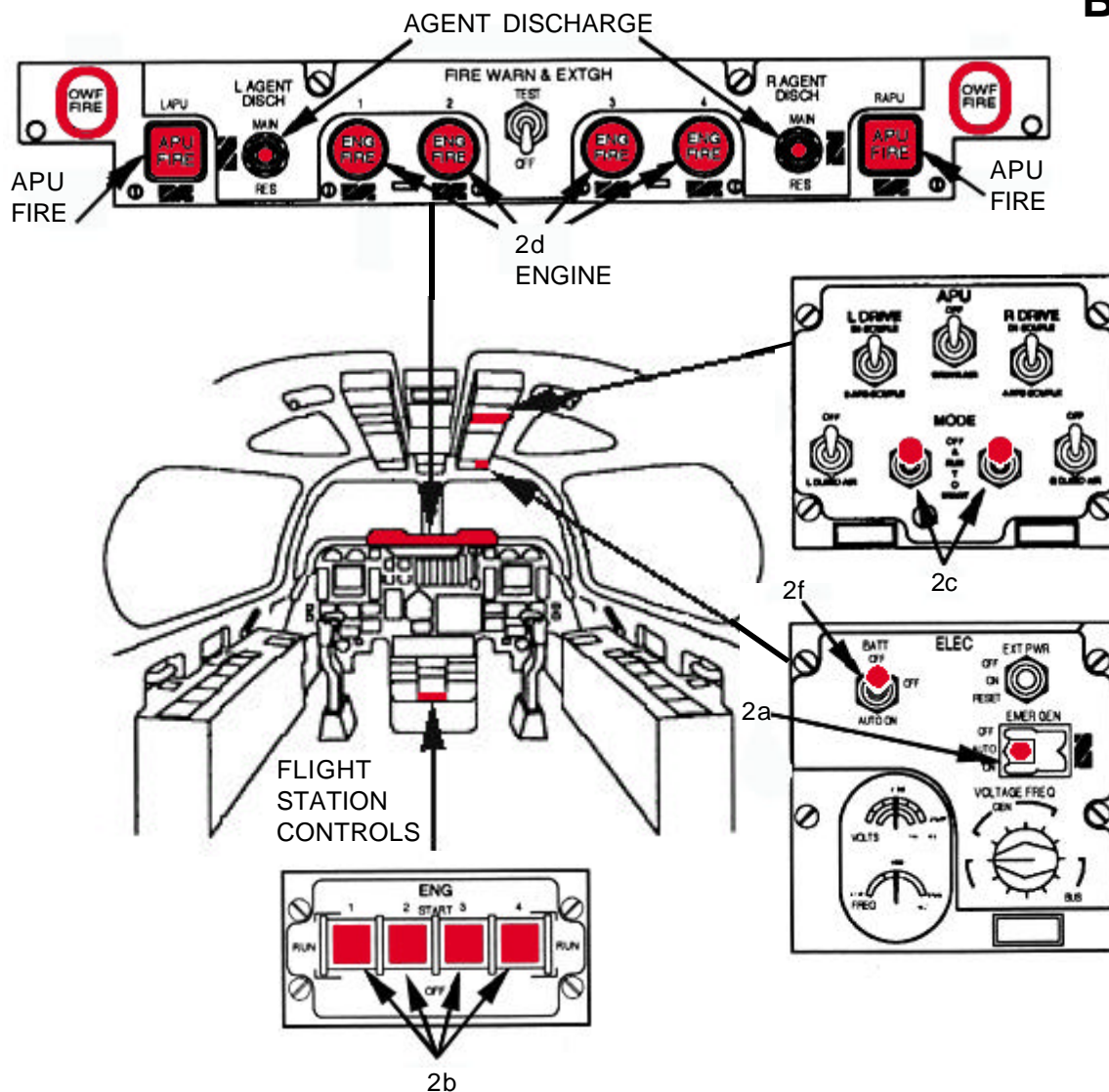
Fuel firewall shutoff valves may not close if a one second delay is not observed prior to depressing another pushbutton on same side!!!

NOTE:

Some combinations of electrical malfunctions or engine shutdown sequences may result in being unable to shutdown an engine using engine start switches. The engine fire pushbuttons should be used to ensure engine shutdown.

- e. Depress LEFT and RIGHT Overwing Faring Fire Pushbuttons located to the left of left APU Fire and to the right of right APU Fire pushbuttons.

- f. Set Battery Switch to OFF.



EJECTION SYSTEM SAFETYING AND AIRCREW EXTRACTION

B-1

NOTE:

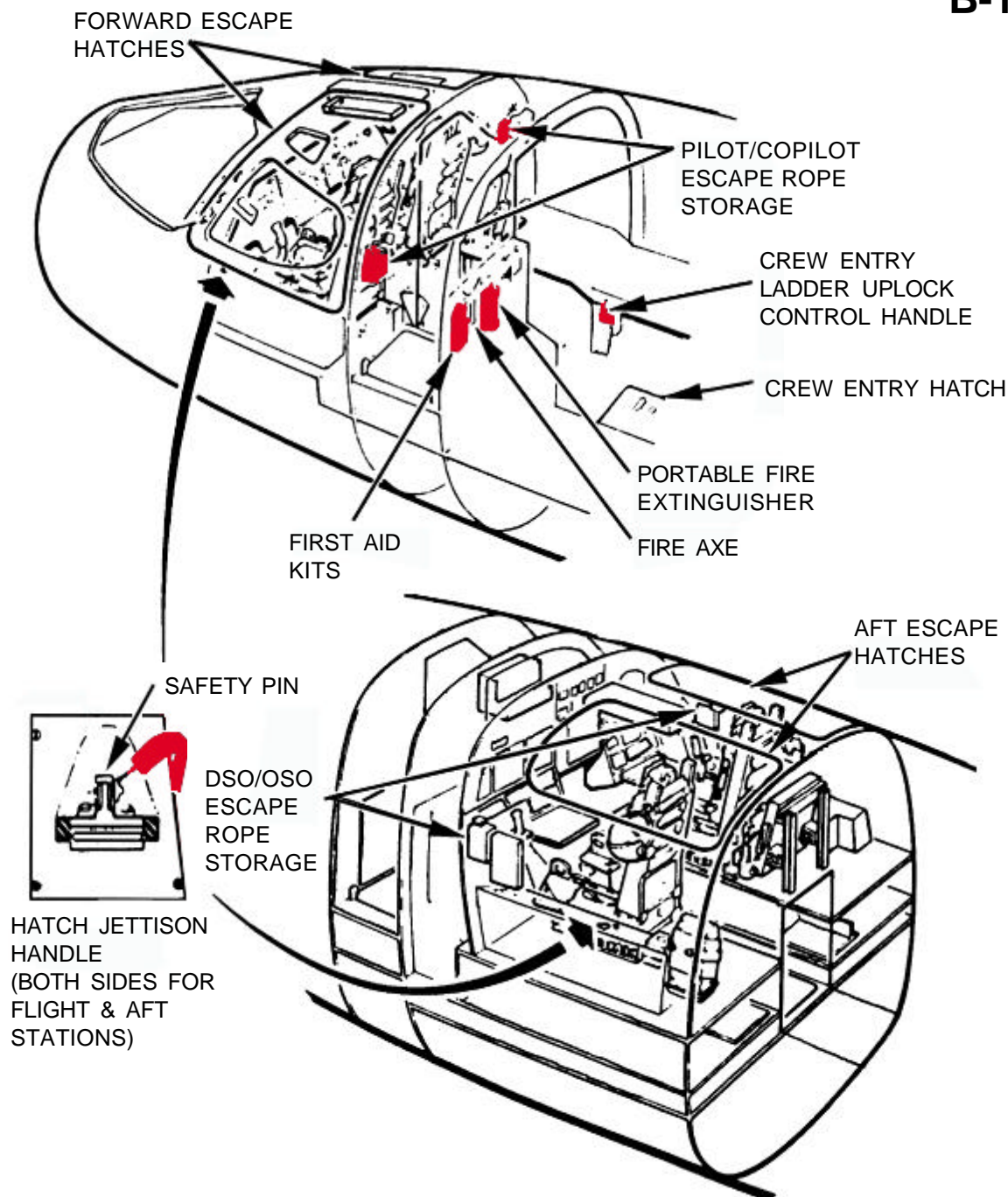
The seats (4) cannot be ejected if the hatches are jettisoned using the "MASTER HATCH JETTISON" handle.

WARNING

Only the seats (2) on the right side of the aircraft cannot be ejected if the hatches are jettisoned using the right external "HATCH JETTISON" handle. The seats (2) on the left side of the aircraft cannot be ejected if the hatches are jettisoned using the left external "HATCH JETTISON" handle. The seats opposite the seats with hatches jettisoned must be safetied. All ejection seats should be considered dangerous at all times due to the possible malfunction of explosive interrupts in the ejection system.

WARNING

All 4 seats can be ejected if the hatches have not been jettisoned or if the hatches are jettisoned using the "INTERIOR HATCH JETTISON" handles.



EJECTION SEAT SAFETYING AND AIRCREW EXTRACTION - Continued

1. NORMAL EJECTION SYSTEM SAFETYING

- Rotate ground safety lever, located directly aft of the left Ejection Control Handle, UP and FORWARD.

NOTE:

All interior safety pins are stowed in a container located on the overhead centerline of the aircraft, between the galley and the toilet.

- Insert safety pin in Ejection Control Handle. Safety pin can only be inserted from the forward inboard side of the left Ejection Control Handle.
- On B-1B production aircraft only: Place Mode Select Switch in manual position at each crew station.
- Install safety pin in Hatch Jettison Handle, located on side console at each crew station.
- Install safety pin in Bottom Bailout Handle, located between the forward and aft crew stations on the center aisle left wall.
- Install safety pin in Cabin Airdump Handle, located on aft end of forward crew overhead panel.

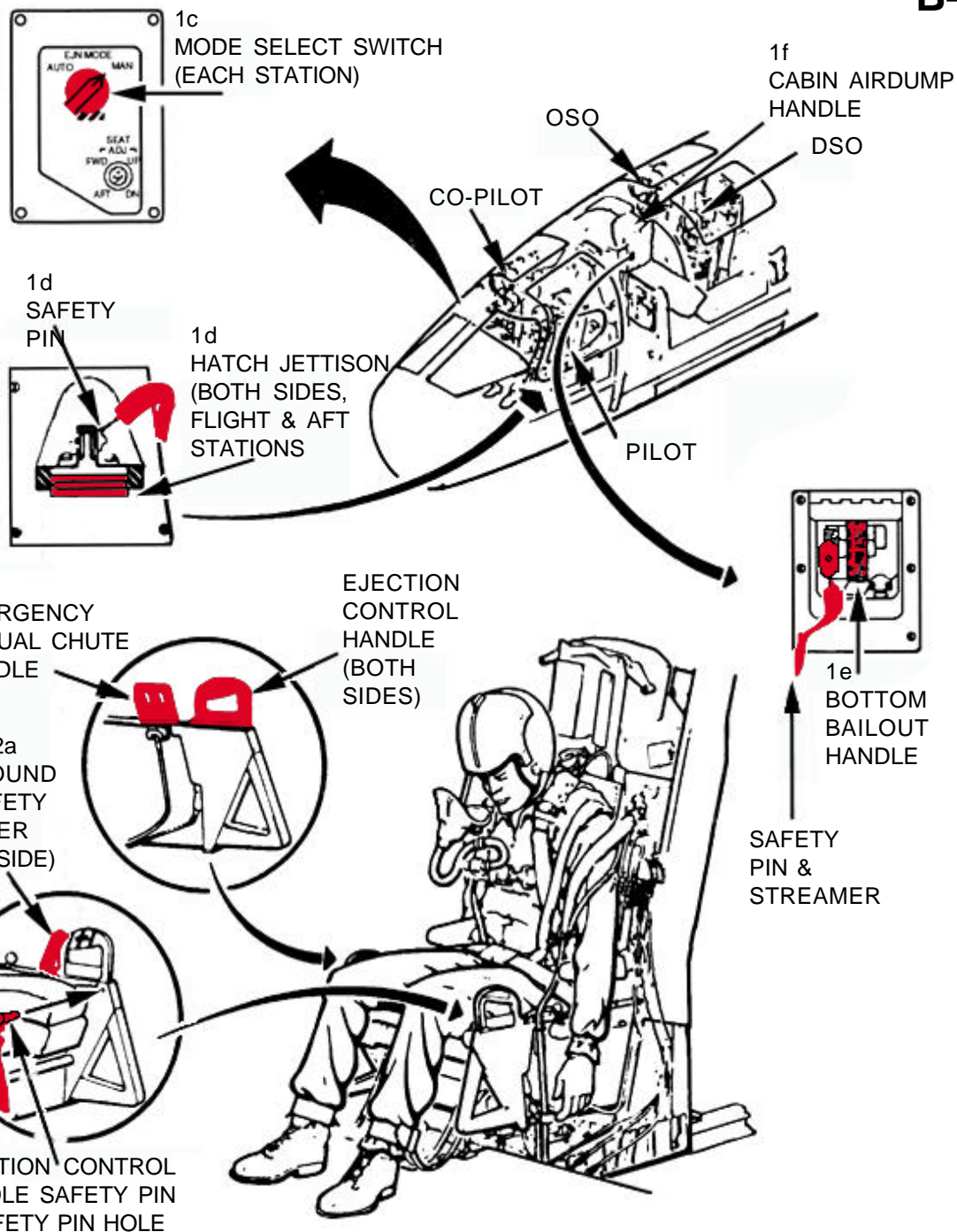
2. EMERGENCY EJECTION SYSTEM SAFETYING

- Rotate Ground Safety Lever, located directly aft of the left Ejection Control Handle, UP and FORWARD. If the safety pin can not be located, tape or tie the Ejection Control Handle in the safe position.

3. AIRCREW EXTRACTION

NOTE:

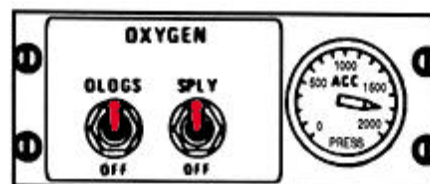
- The Emergency Manual Chute Handle, located on the right side of seat directly behind the right Ejection Control Handle, DOES NOT release restraint system. Manual release of each restraint and lead is necessary prior to extraction.
- If safetying the Emergency Manual Chute Handle is elected, insure entanglement does not occur with crewmember and safety streamer. Streamer should be routed under crewmember's legs.



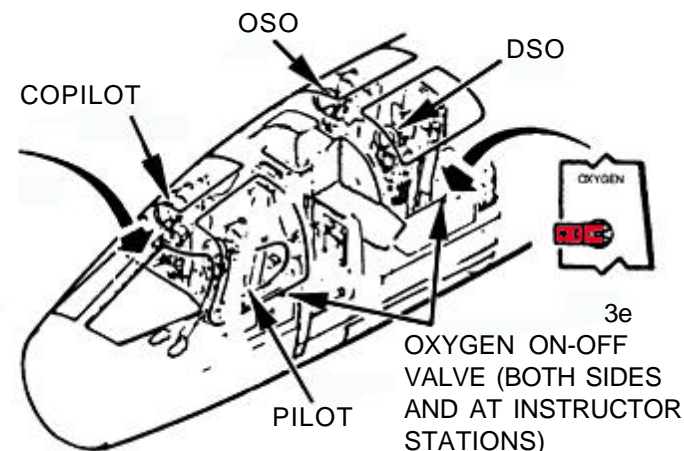
AIRCREW EXTRACTION-Continued

3. AIRCREW EXTRACTION-Continued

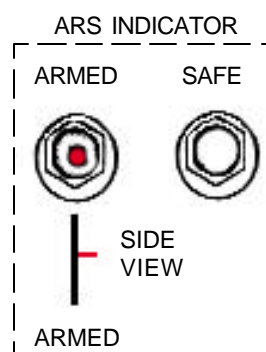
- a. Disconnect left and right leg restraints at the crewmembers legs.
- b. Release lap belt by lifting cover and pulling release bar.
- c. Release left and right survival kit buckles by depressing "PUSH TO RELEASE" tab on each buckle.
- d. Release left and right shoulder harness fittings by lifting cover and pulling release bar on each fitting.
- e. Place oxygen "ON-OFF" valve, located on side console at each crewmember's station, to "OFF".
- f. Disconnect oxygen hose and communications cord.
- g. Place oxygen "MSOGS" switch and "SPLY" switch, located on copilot's side console, to "OFF". This shuts down the oxygen generating system and stops the flow of oxygen from the system.



3g
OXYGEN PANEL
(COPILOT STATION ONLY)

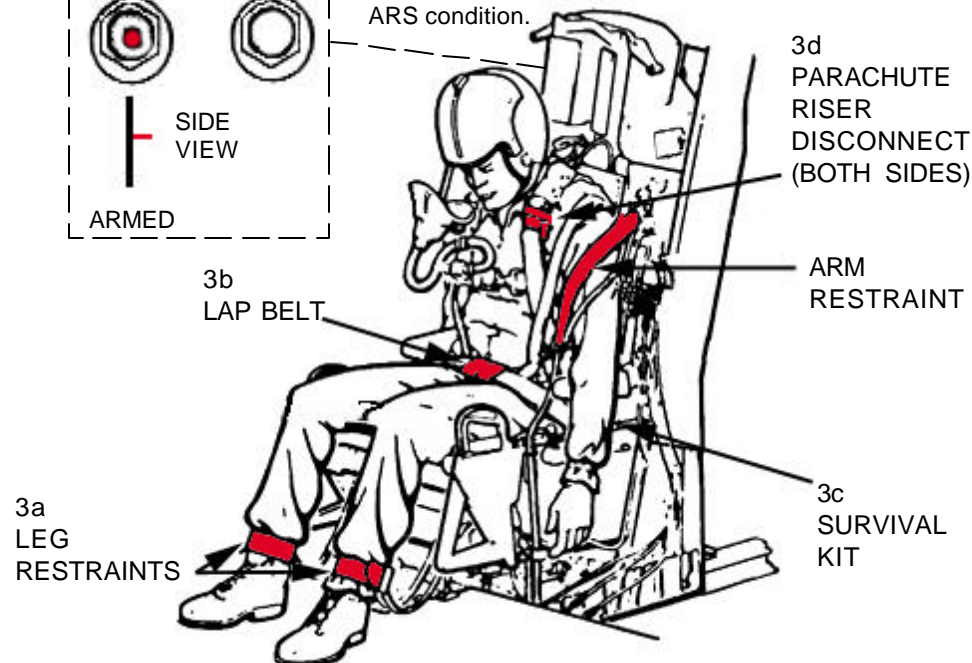


3e
OXYGEN ON-OFF
VALVE (BOTH SIDES
AND AT INSTRUCTOR
STATIONS)



NOTE:

Do not touch indicator sealant when checking condition. Frequent touching wears off sealant exposing tip of red pin indicating a false ARMED ARS condition.



3a
LEG
RESTRAINTS

3b
LAP BELT

ARM
RESTRAINT

3c
SURVIVAL
KIT

3d
PARACHUTE
RISER
DISCONNECT
(BOTH SIDES)

AIRCREW EXTRACTION-Continued

4. AIRCREW EXTRACTION (INSTRUCTOR PILOT (IP) STATION)

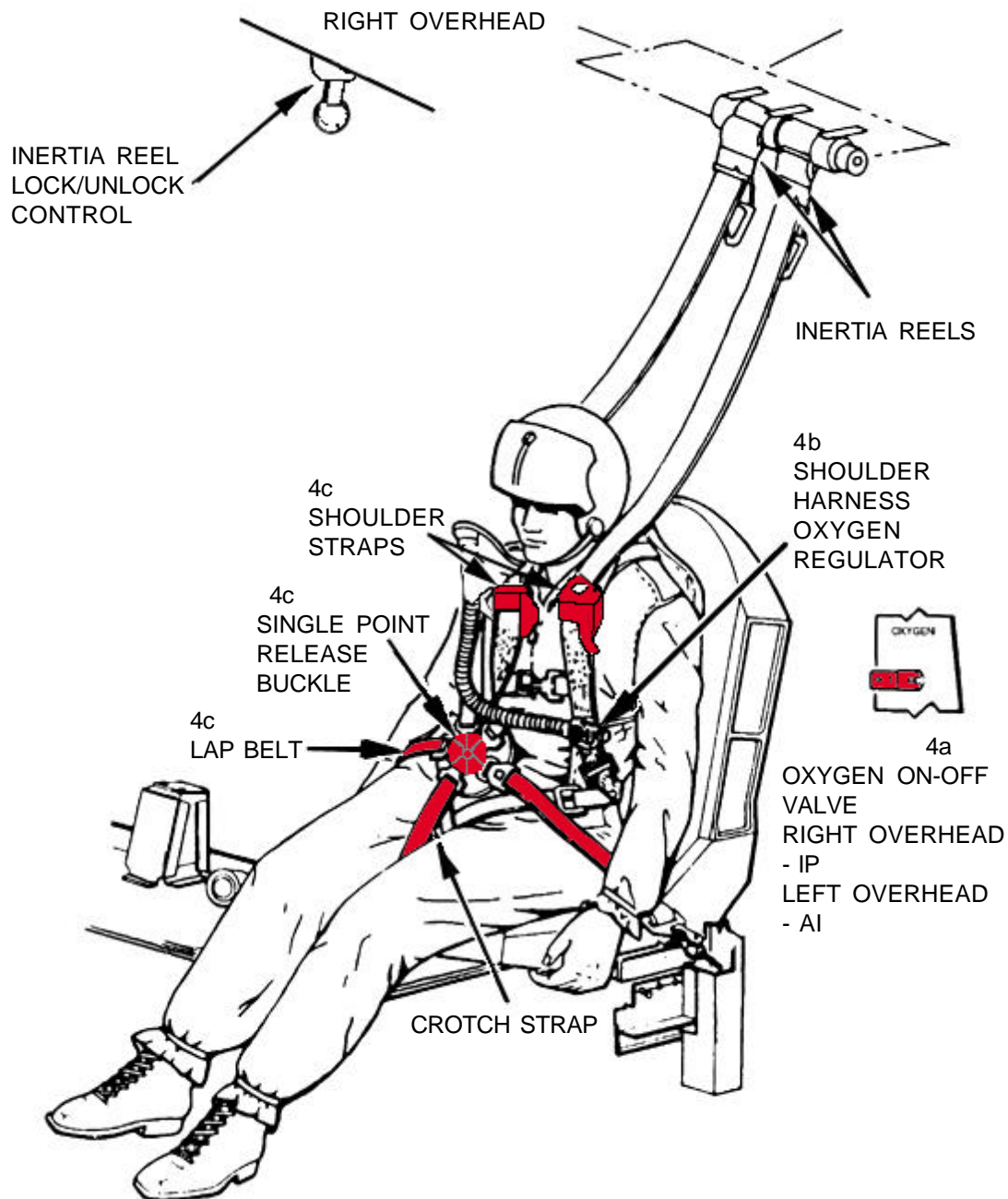
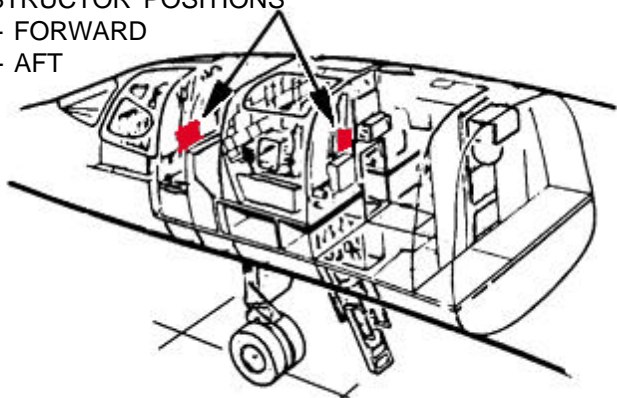
- Place oxygen on-off valve, located on overhead to right and above IP's right shoulder, to "OFF".
- Turn oxygen regulator knob, located on right shoulder harness, clockwise to shut off oxygen to mask if emergency oxygen has been activated.
- Rotate single point release knob 90 degrees in either direction to release shoulder harness, lap belt, and crotch strap.
- Disconnect oxygen hose and communication cord.

5. AIRCREW EXTRACTION (AVIONICS INSTRUCTOR (AI) STATION)

- Place oxygen on-off valve, located on overhead behind AI's left shoulder, to "OFF".
- Turn oxygen regulator knob, located on right shoulder harness, clockwise to shut off oxygen to mask if emergency oxygen has been activated.
- Rotate single point release knob 90 degrees in either direction to release shoulder harness, lap belt, and crotch strap.
- Disconnect oxygen hose and communication cord.

INSTRUCTOR POSITIONS

IP - FORWARD
AI - AFT



B-2

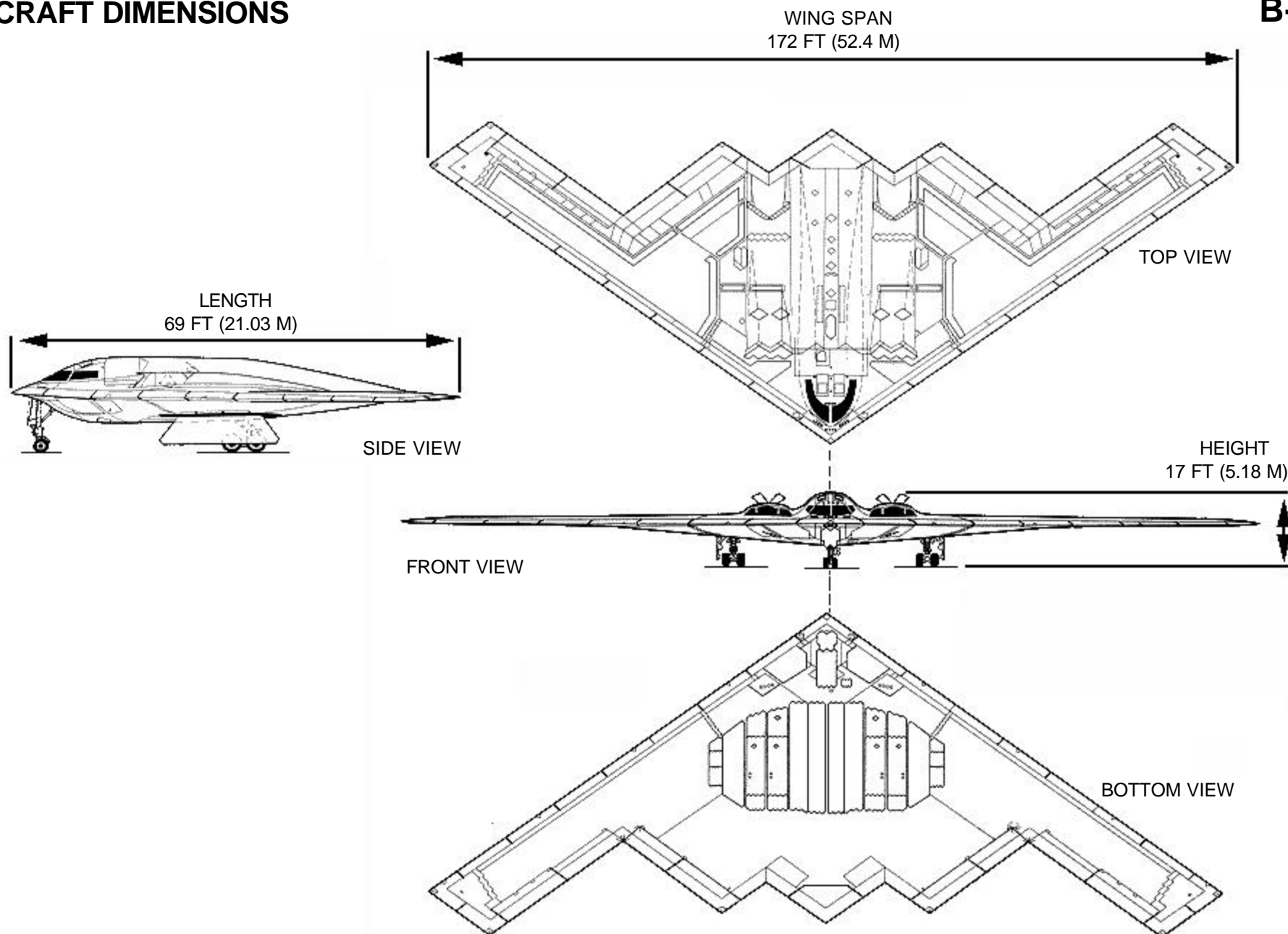
AIRCRAFT PAINT SCHEME

B-2.1

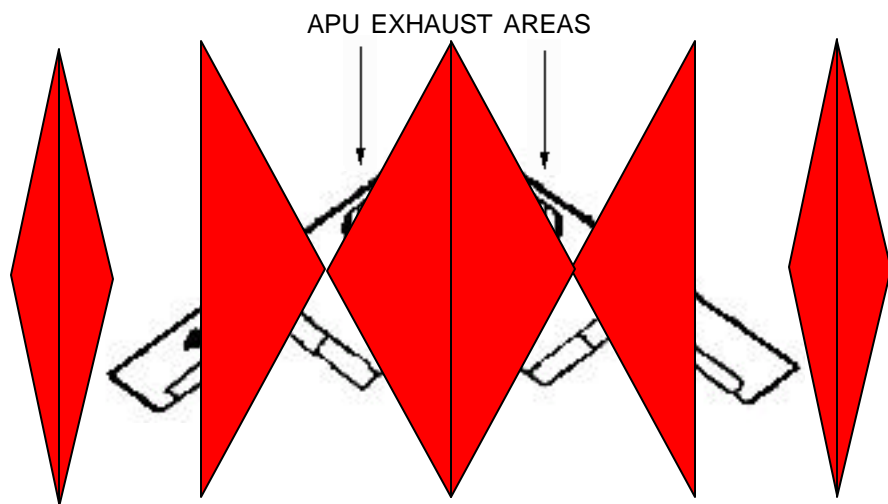


AIRCRAFT DIMENSIONS

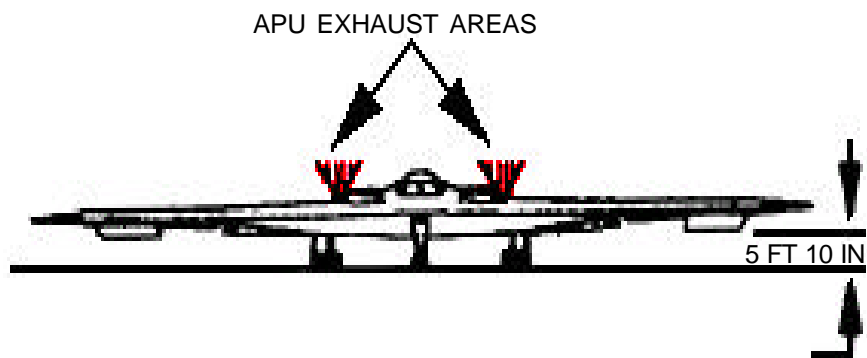
B-2



DANGER AREAS



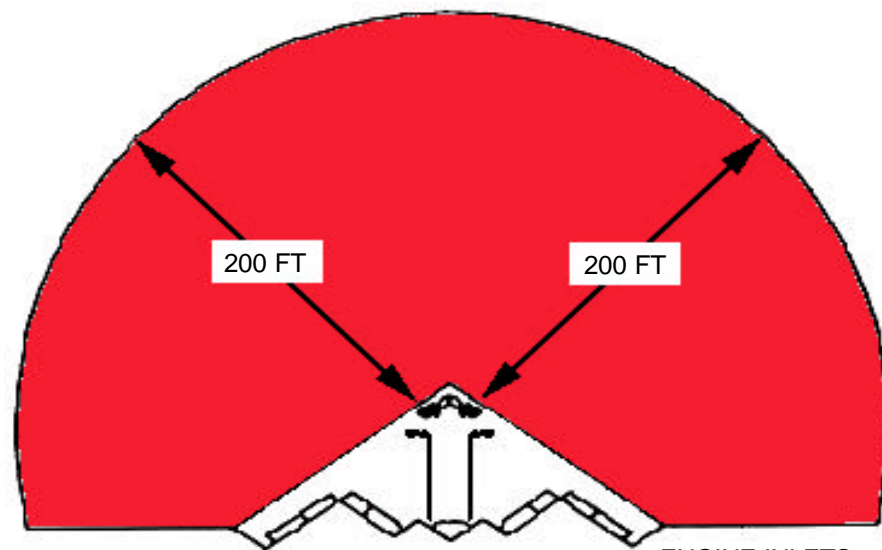
TIRE/HOT BRAKES AVOIDANCE AREA EXTENDS TO 300 FEET. APPROACH FROM FRONT OR REAR ONLY.



WARNING

AVOID AIRCRAFT TRAILING EDGE. ALL FLIGHT CONTROL SURFACES COULD MOVE UP AND DOWN RAPIDLY.

RADAR RADIATION AREA



ENGINE INLETS

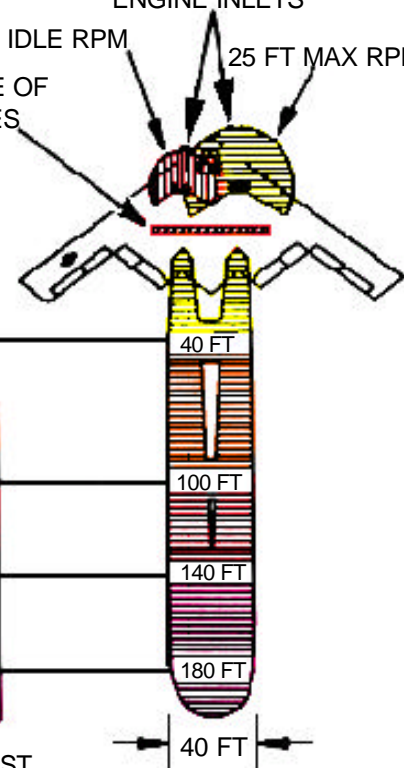
15 FT IDLE RPM

25 FT MAX RPM

ROTATION PLANE OF
ENGINE TURBINES

ENGINE EXHAUST VELOCITIES (MPH)			
MAXIMUM RPM		IDLE RPM	
TEMP	VELOCITY	TEMP	VELOCITY
•	450	•	75
•	200	•	35
•	150	•	30
•	100	•	22

* HIGH TEMPERATURES EXIST IN ENGINE EXHAUST



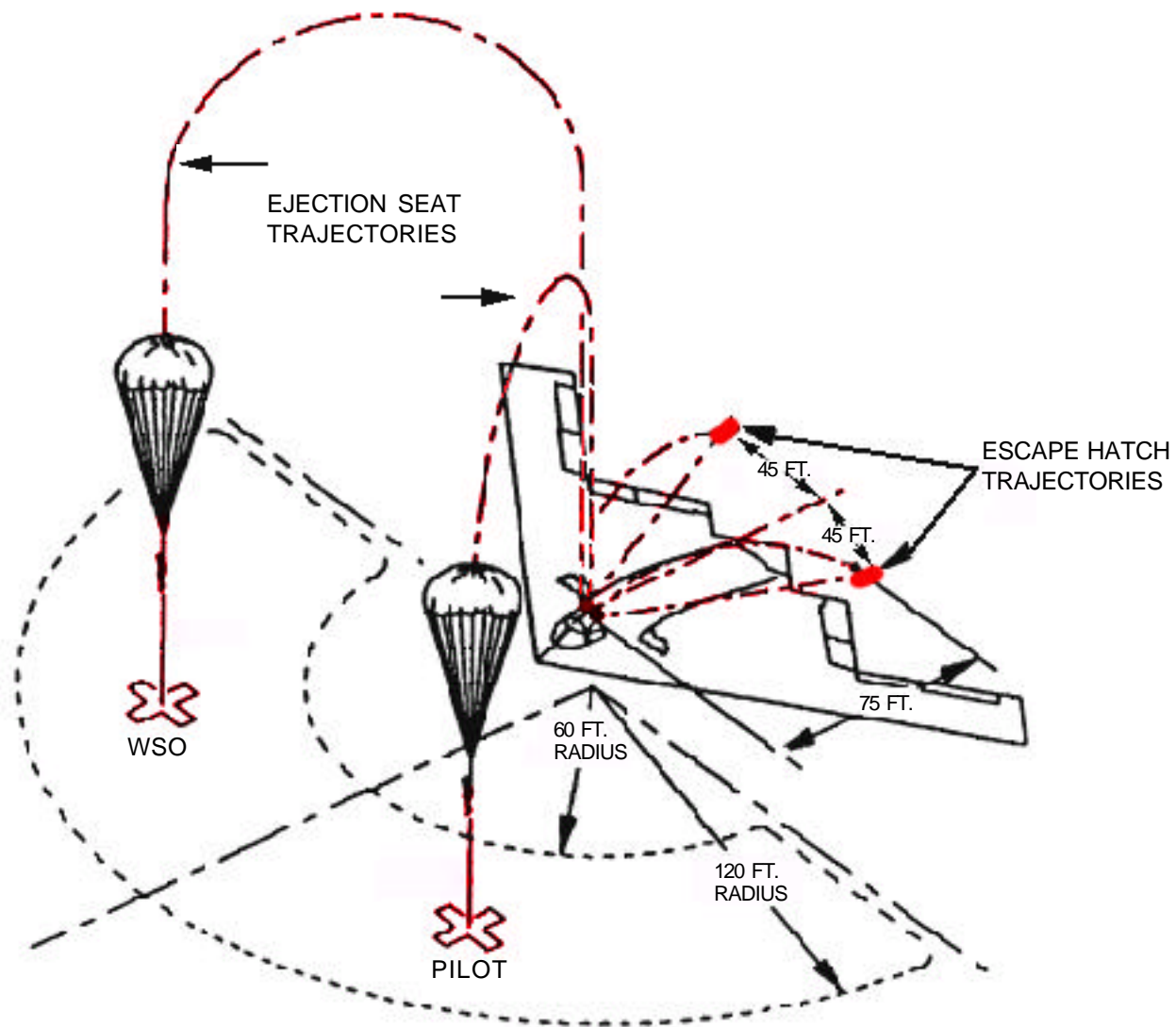
B-2

IMPACT DANGER AREAS

1. EJECTION SEAT AND HATCH TRAJECTORIES

WARNING

Keep personnel and vehicles clear of impact areas during emergency entry.



ENGINE, WEAPONS BAY AND EQUIPMENT BAY FIRE ACCESS

1. ENGINE FIRES
 - a. Use the Fire Panels as illustrated.
2. WEAPONS BAY FIRES

WARNING

When opening the weapons bay doors, to prevent injury or death to personnel, insure that area under weapons bay doors is clear of personnel and equipment before opening.

- a. To open the weapons bay doors, locate the Ground Control Panel under a latched cover, right side of crew entry door opening. Set function switch to GRD. Press ENABLE switch and hold Left or Right bay doors switch in open position until doors are open, then release ENABLE switch.

3. AFT EQUIPMENT BAY FIRES

WARNING

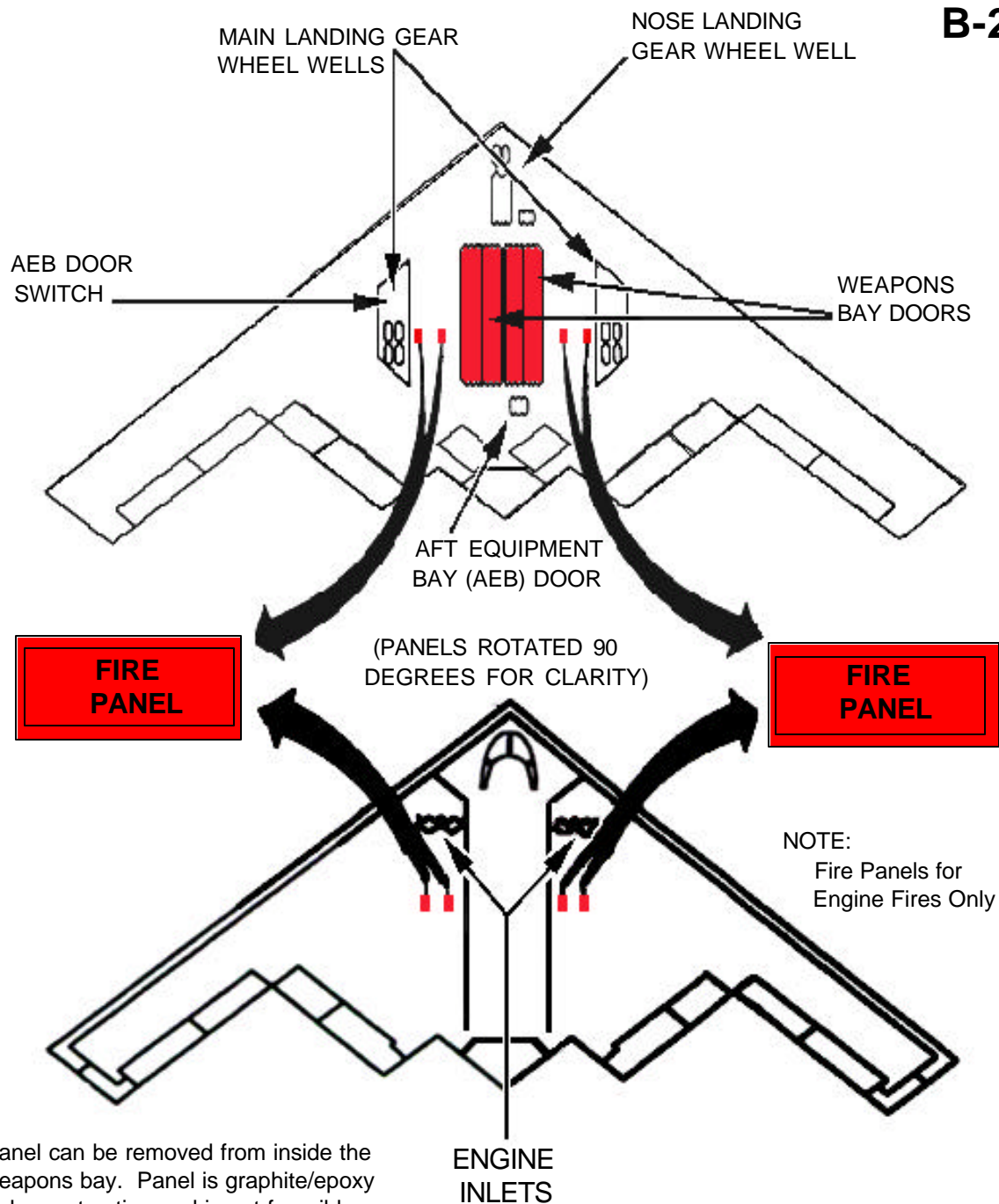
Failure to DISABLE AEB door upon entering AEB could result in injury or death. Insure no personnel remain inside and are clear and aft of area prior to closing AEB door. Failure to comply could result in injury or death.

NOTE:
To open AEB door, weapons bay doors must be open to access disable switch.

CAUTION

AEB door seals are sharp. AEB ladder must be pinned prior to ascent. Do not stand on door.

NOTE:
Weapons bay doors and AEB door can be opened either electrically or manually.



NOTE:
Access panel can be removed from inside the AEB or weapons bay. Panel is graphite/epoxy honeycomb construction and is not frangible, but is only way in if power is unavailable.

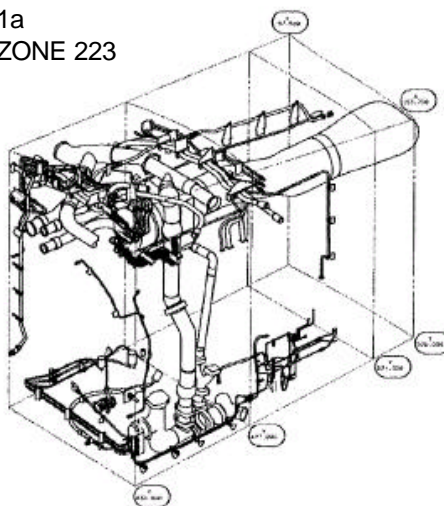
B-2

ENGINE BAY FIRE ACCESS

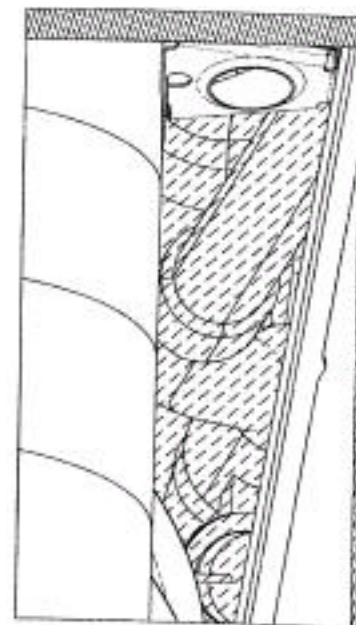
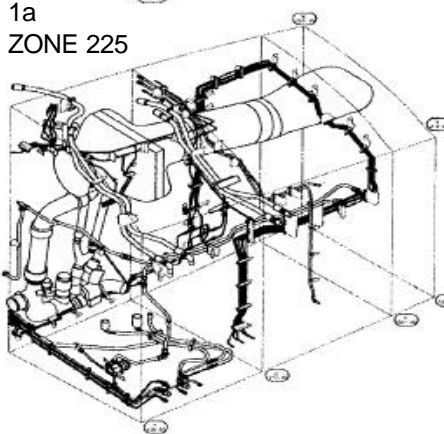
1. ENGINE BAY CUT-IN AREAS FOR FIRE ACCESS - SAFETY RECOMMENDATIONS

- a. Zone drawings define system installations by location. Zones 223 and 225 include several hydraulic systems and Environmental Control System (ECS) ducting and bleed-air ducting.
- b. The opening is not large enough for a full depth penetration by the power rescue saw of 5". A cut of 4.1 X 6.8" will hit the ECS.
- c. The power rescue saw is not adjustable, so in order to cut-in and later, perform a scarf repair of the cut-out, an angle of 58-60 degrees must be employed.
- d. The skin for zones 223 and 225 are graphite epoxy laminate. The honeycomb core lies between frames and bulkheads with a pure laminate graphite stack attached to their upper caps. Thicknesses are illustrated.
- e. The recommendation is maintain a minimum clearance of 2-3" from adjacent frames and bulkheads to prevent unnecessary damage. Additionally, it is suggested to leave enough material around the perimeter of a cut-in through a honeycomb skin to allow a 30:1 taper for a subsequent scarf repair.

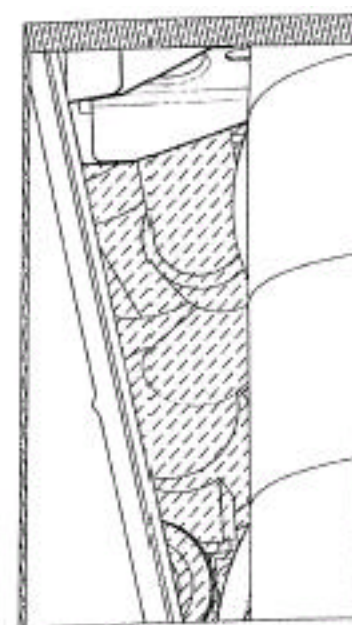
1a
ZONE 223



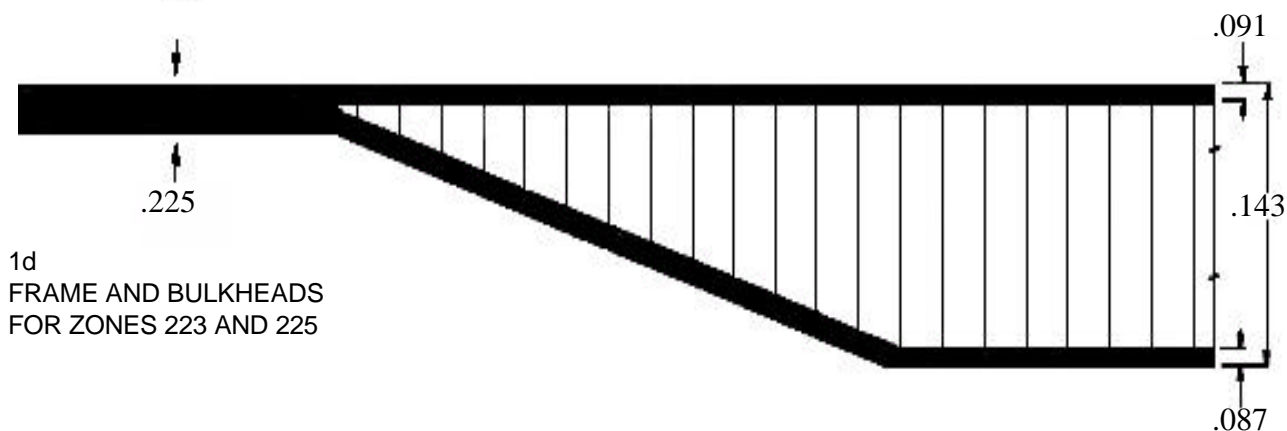
1a
ZONE 225



1b, 1c
ZONE 223 AFTER CUT
PANEL IS REMOVED



1b, 1c
ZONE 225 AFTER CUT
PANEL IS REMOVED

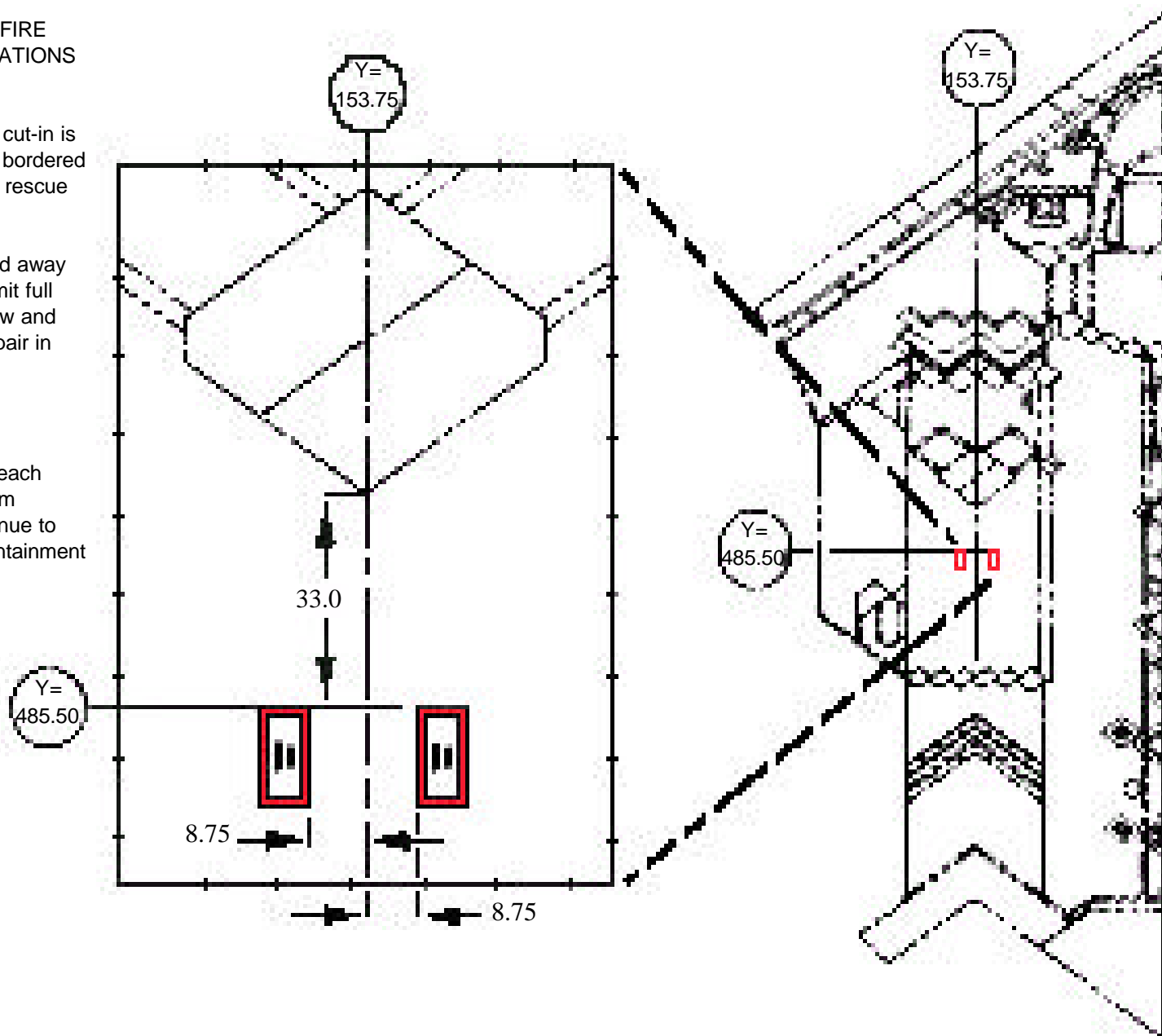


ENGINE BAY FIRE ACCESS - Continued

1. ENGINE BAY CUT-IN AREAS FOR FIRE ACCESS - SAFETY RECOMMENDATIONS - Continued
- f. The best location for the engine bay cut-in is aft of the Y=477 frame. This area is bordered in red. This allows use of the power rescue saw.
- g. The location shown are safely spaced away from systems and structures to permit full depth cuts with the power rescue saw and allow for a subsequent 30:1 scarf repair in the composite skins.

WARNING

Cutting in forward of this area will breach underlying hydraulic lines and system ducting and allow reservoirs to continue to feed a fire outside the engine fire containment zone.



AIRCRAFT HAZARDS

WARNING

The B-2A can have additional hazardous material on board. In emergency situations, contact the nearest ACC command post of Headquarters ACC command post via secure communication line.

NOTE:

The hazardous substance hydrazine has been removed from all B-2A aircraft.

WARNING

All edges including doors are sharp. All surfaces are very slick and this condition is worsened by wetness.

FUEL

Fuel Type - JP-8
 Fuel Weight - 180 - 200K lbs.
 Fuel Total - 29,400 Gallons
 Fuel tanks - 8 total, 4 each wing.
 Fuel quantity approx. 3,600 gals each tank. Wing tip tanks are surge tanks only

HYDRAULICS

High Pressure - 4,000PSI with power on

OXYGEN

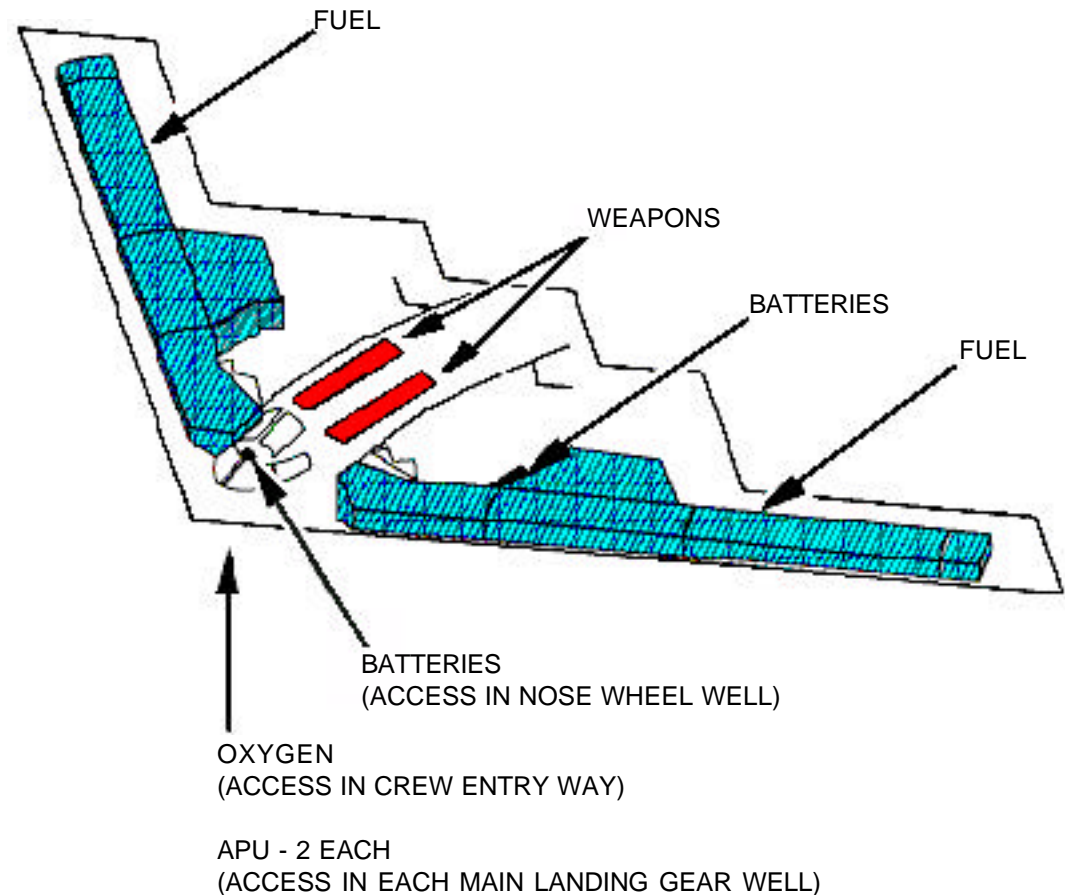
- 1) MSOGS - Molecular Sieve Oxygen System
- 2) 1,800 PSI Backup System - 1 - 1,000 inch green cylinder located in the crew entry way halfway up ladder on left
- 3) Separate O2 bottles located on each ejection seat assembly (12 minute supply)

WEAPONS - Nuclear and Conventional Armament capability based on configuration:

- 1) 16 - 2,000 lb weapons on a rotary launcher
- 2) 36 - cluster bomb units on a bomb rack assembly
- 3) 80 - 500 lb weapons on a bomb rack assembly

FLARES AND CHAFF DISPENSERS

NONE



AIRCRAFT HAZARDS - Continued

B-2

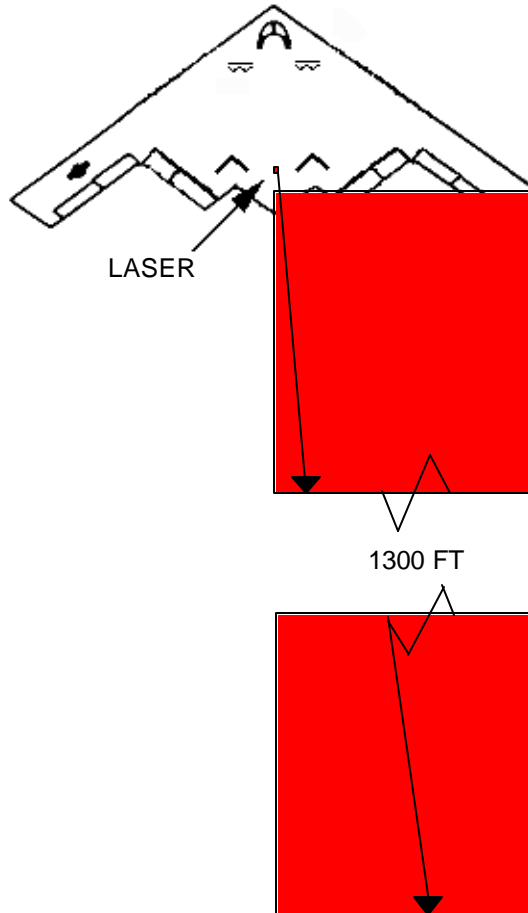
1. AVOIDANCE AREA

WARNING

An aircraft-mounted laser could be a hazard to firefighting and rescue personnel responding to a B-2A landing emergency. Multiple aircraft equipment failures are required for the hazard to exist. The hazard is slight to personnel in a moving vehicle or when the aircraft is moving. After the aircraft is stopped, the area out to 1300 feet aft of the aircraft from centerline to the right wingtip should be avoided.

NOTE:

The Emergency Power System (EPS) has been removed from the aircraft.



AIRFRAME MATERIALS

1. AIRFRAME MATERIALS

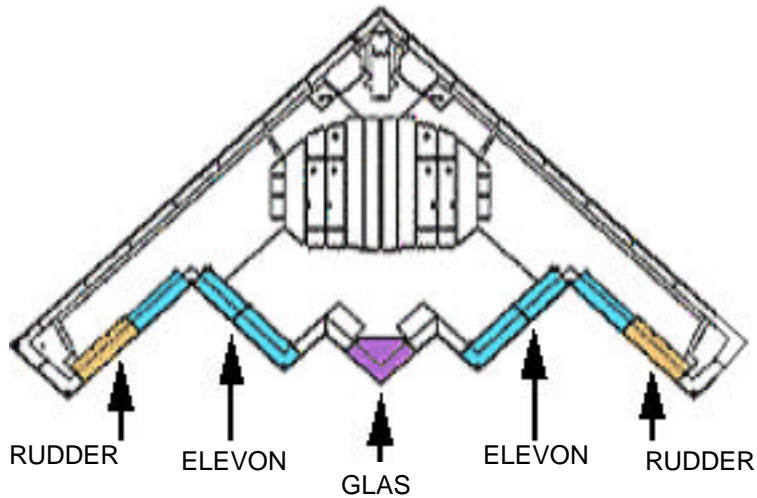
- a. Specific location of materials is considered sensitive information. However, the three main materials are
- 1) Composite: Graphite Epoxy - After epoxy is consumed by fire, carbon fiber combustion occurs.
 - 2) Aluminum and 3) Magnesium.

NOTE:

There are 14 generic flammable materials classes.

EPOXIES
POLYIMIDES
BISMALEIMIDES
PHENOLICS
SILICONES
FLUROSILICOES
URETHANES

POLYSULFIDES
POLYVINYL FLUORIDES
ARAMIDS
POLYMETHACRYLAMIDE
GRAPHITE & CARBON POWDER
POLYETHERETHERKETONE
SILICATE ESTER COOLANTS



B-2



WINGS - COMPOSITE SKIN



STRUCTURE - 90% COMPOSITE



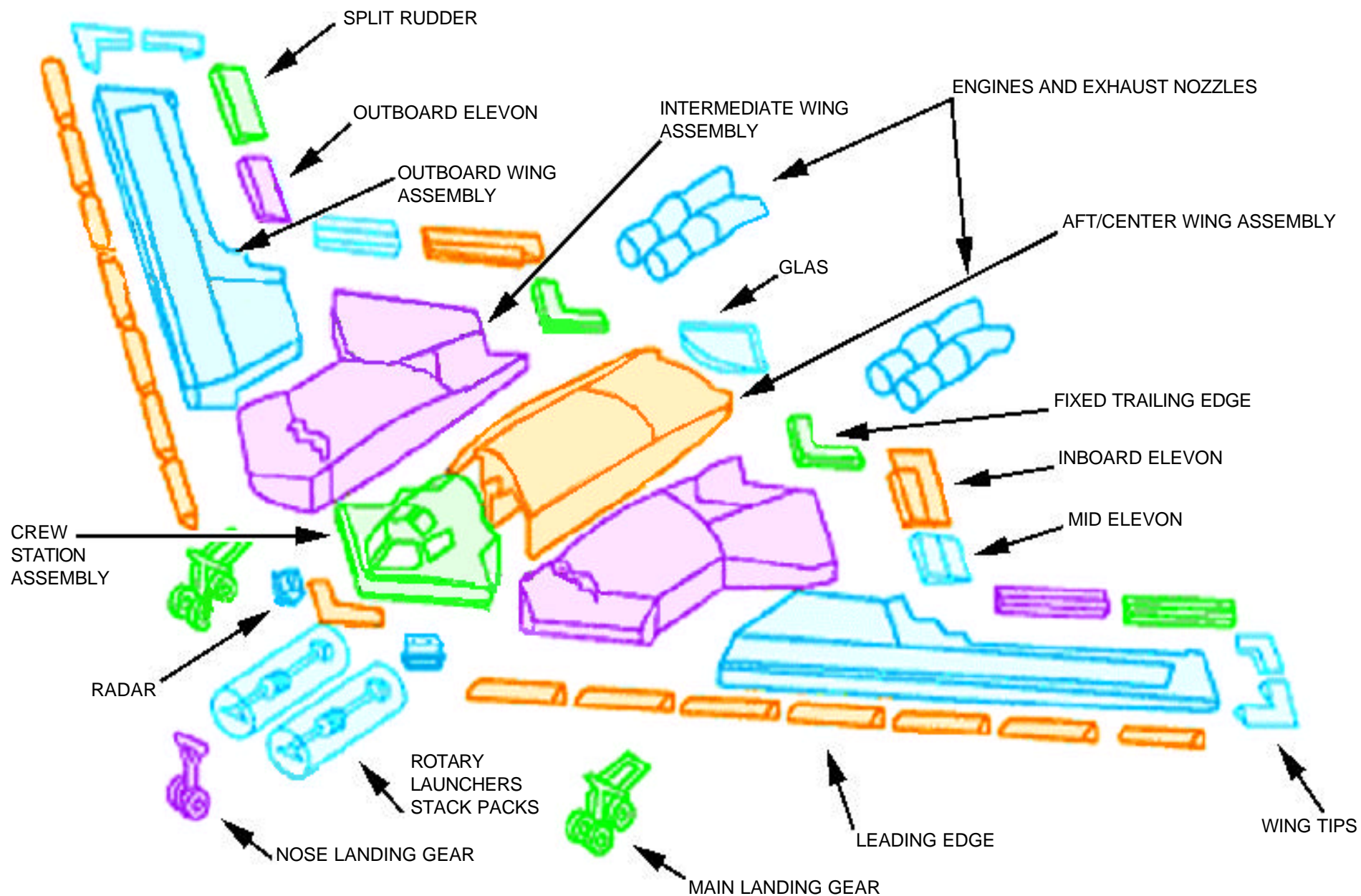
RADOME - COMPOSITE



ENGINE - COMPOSITE

AIRFRAME STRUCTURES

B-2



SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw - 5" cut depth capability
 Crash Axe Rescue Ladder Portable Lights
 Seat Pins PN C114767-1 (2)
 Interior Hatch Jettison Handle Pins PN AN415 4 (2)
 Aft Nose Gear Door Safety Pin PN DAA7252G012-005 (1)
 Entry Ladder Safety Pin PN DAA7200G005-001 (1)
 Fire Drill II

INTRODUCTION

These procedures provide for aircrew rescue from B-2A aircraft. Firefighting crash rescue personnel are assumed to be properly trained and need only be familiar with the peculiarities of this aircraft.

All information applies to all groups of this aircraft except for the Emergency Power System (EPS) as coded in the call outs on two test bed models. All other information has been standardized as far as the firefighter is concerned. Weapons loaded aircraft will be configured to mission requirements. This information is needed during emergency situations as well as other variables. (See variation of weapons loaded aircraft.)

WARNING

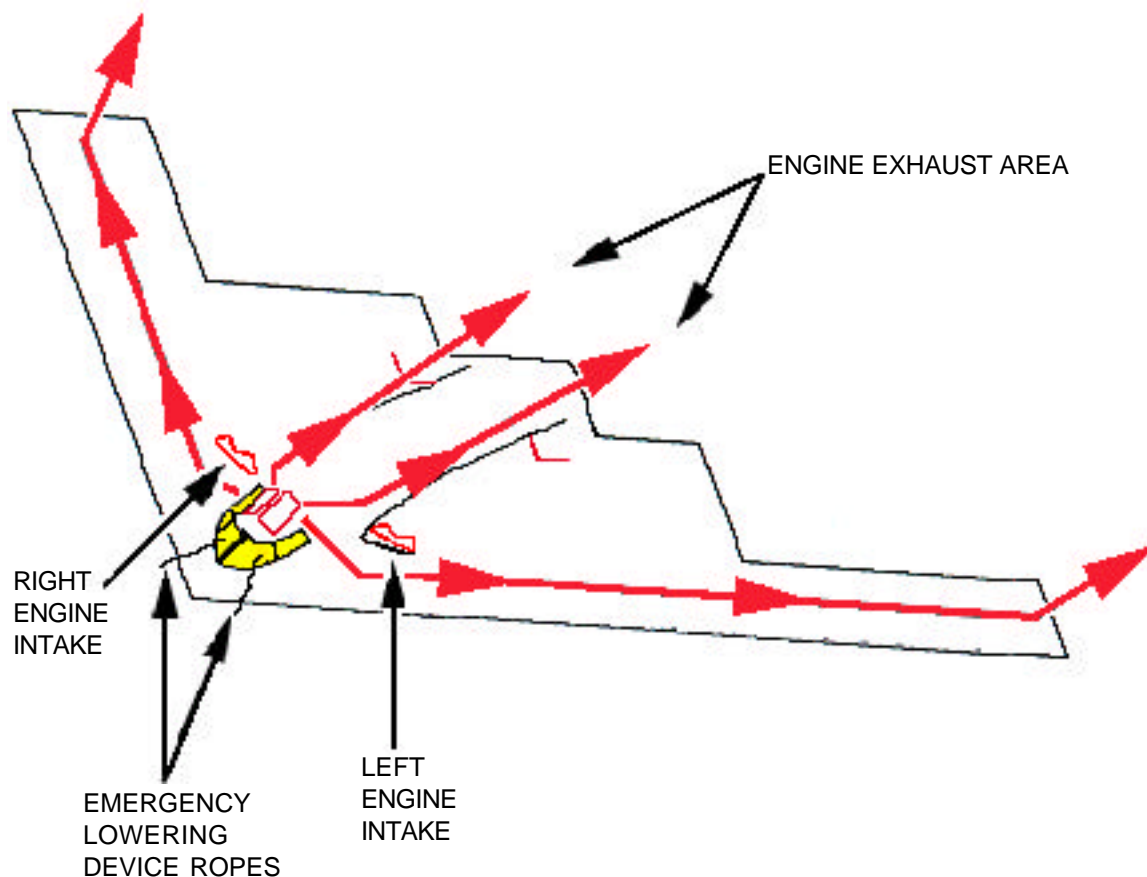
This aircraft has extremely dangerous areas not normally found on other aircraft. Approaching, accessing, operating, and entry into the cockpit and various under fuselage bays can cause injuries or death if procedures are not followed properly. Identify and review all danger areas.

WARNING

Beware of engine intakes during rescue and extraction process. Intake suction has a wine cellar effect and can ingest foreign objects and personnel. If engines can not be shut down, do not use route over engine exhaust.

RESCUE AND ESCAPE ROUTES**NOTE:**

These routes (MARKED IN RED) are primarily used by crew members who select ground egress and time is a premium. If this is the case, beware of the danger that jettisoned hatches present. These routes can also be used by firefighters for rescue and extraction when aircraft has nosed in and the crew entry way can not be accessed.



AIRCRAFT ENTRY

NOTE:

Aircraft entry is through the crew entry door on the left side of the aircraft.

WARNING

Door opening areas must be cleared of personnel and equipment before opening either crew entry or aft nose gear door.

1. NORMAL ENTRY

a. NORMAL ENTRY DOOR ACCESS

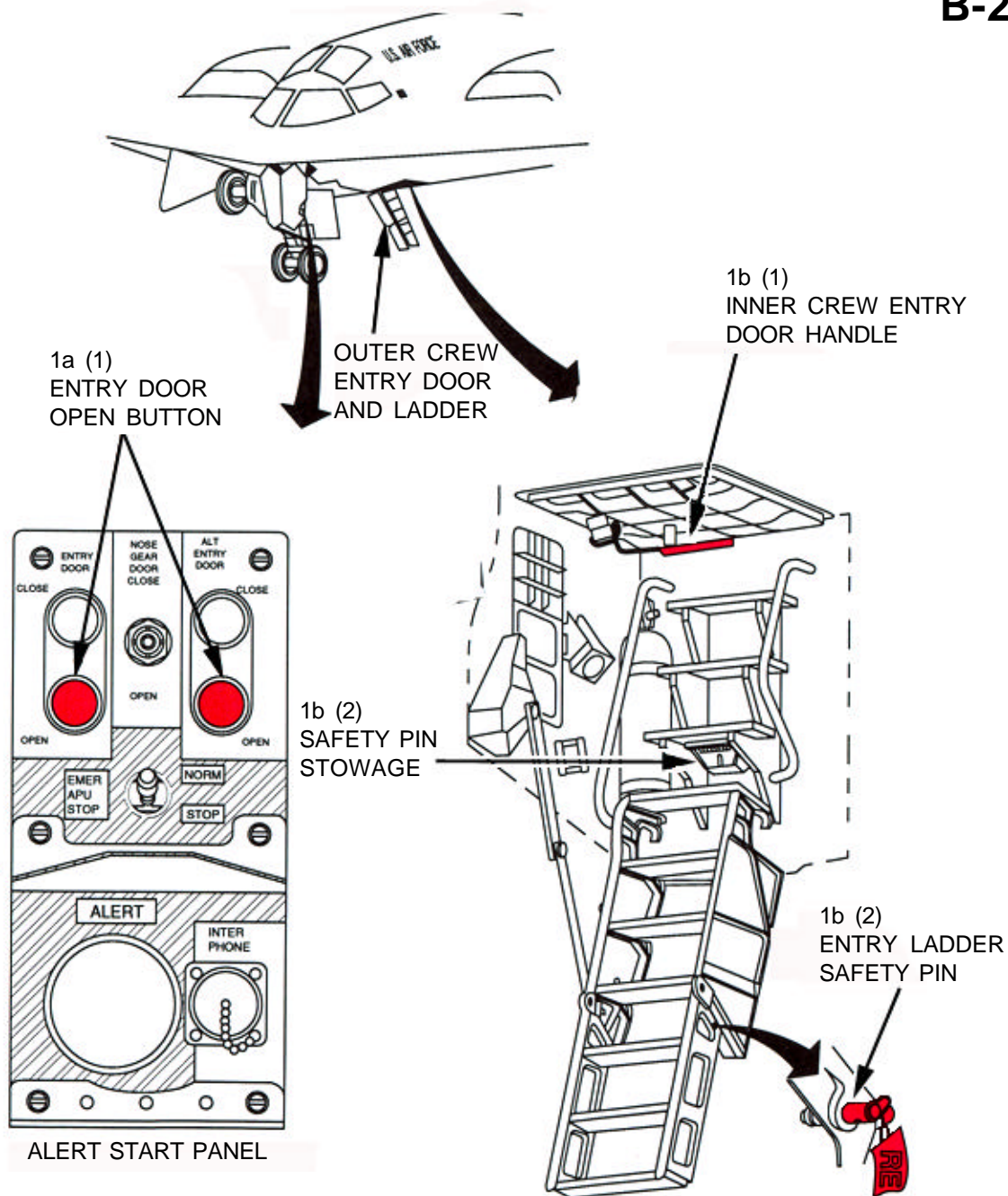
(1) Push either the ENTRY DOOR OPEN switch on the alert start panel, OR pull the ALT ENTRY DOOR UNLOCK lever, in the nose-wheel well aft bulkhead. Return lever to NEUTRAL. Door opens within fifteen seconds.

b. ENTER AIRCRAFT

WARNING

To prevent injury to personnel, maintain positive control of lower ladder. Ladder will retract slightly if released.

- (1) Pull lower ladder to full down position.
- (2) Remove safety pin (P/N DAA7200G005-001) from safety pin stowage, located under third step from top of ladder, and install in ladder at bottom third step on right side.
- (3) Install blade seal protectors if available.
- (4) Climb crew entry ladder to inner crew entry door, turn door handle clockwise 180 degrees, push door, until it latches in the open position. Door could be difficult to push against cabin pressurization if engines are running.



AIRCRAFT ENTRY - Continued

2. MANUAL ENTRY

WARNING

Do not enter nose wheel well unless the aft nose gear door safety pin is installed.

NOTE:

Electrical and hydraulic power must be available to open nose gear door.

a. MANUAL ENTRY DOOR ACCESS

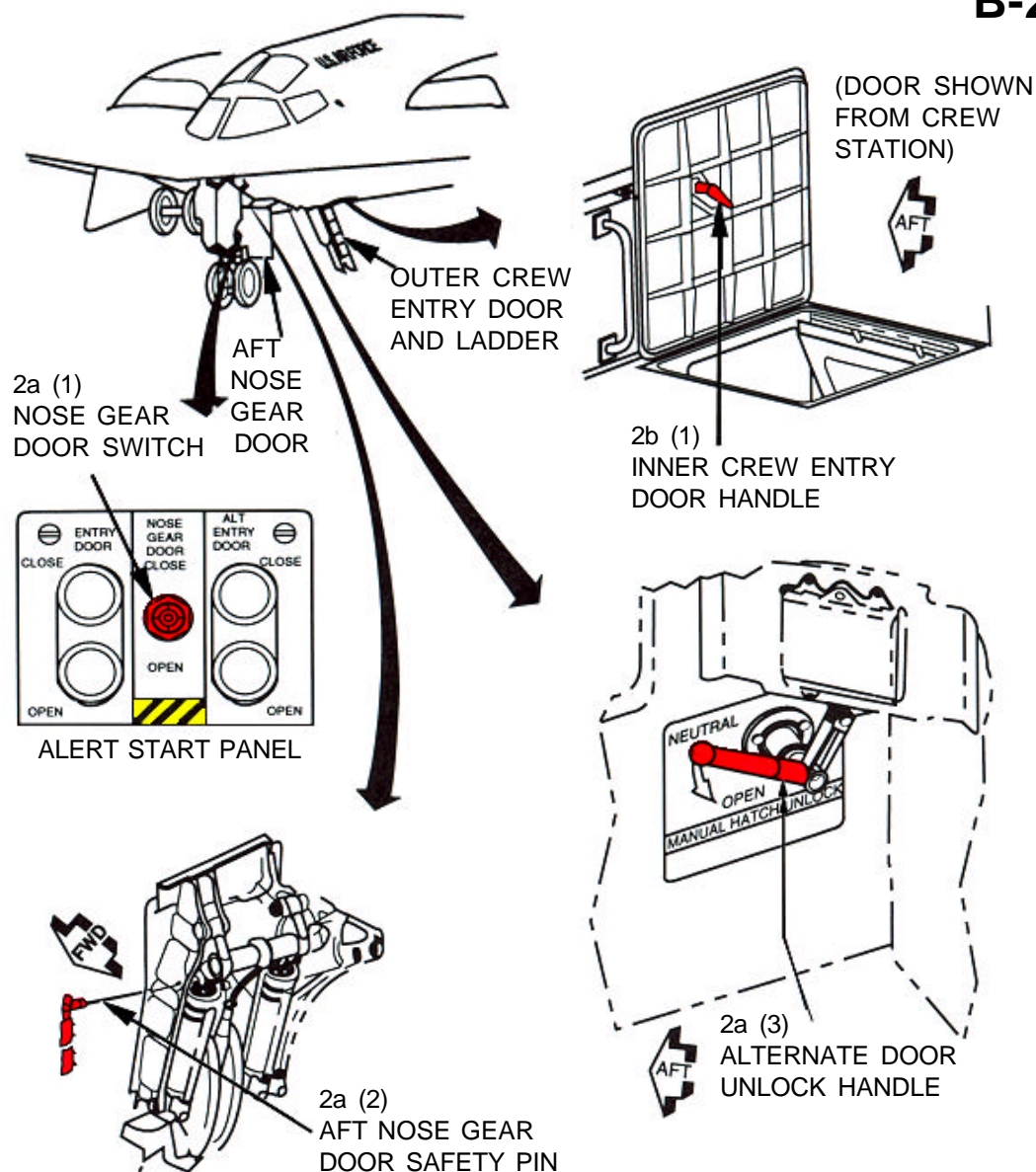
- (1) Place nose gear door switch to OPEN.
- (2) After aft nose gear door opens, install aft nose gear door safety pin (P/N DAA 7252G012-005).
- (3) Manually rotate ALTERNATE DOOR UNLOCK lever on the aft bulkhead of nose wheel well to OPEN. Substantial force is required to pull the lever. Outer crew entry door opens partially and exposes door edge. Carefully pull down to full open and manually extend crew entry ladder.

b. ENTER AIRCRAFT

WARNING

To prevent injury to personnel, maintain positive control of lower ladder. Ladder will retract slightly if released.

- (1) Remove safety pin (P/N DAA7200G005-001) from safety pin stowage, located under third step from top of ladder, and install in ladder at bottom third step on right side.
- (2) Install blade seal protectors if available.
- (3) Climb crew entry ladder to inner crew entry door, turn door handle clockwise 180 degrees, push door, until it latches in the open position. Door could be difficult to push against cabin pressurization if engines are running.



EMERGENCY ENTRY

External emergency escape hatch jettison T-handles are located on both sides of the crew compartment.

WARNING

- Approach the crew compartment only if secured by restraint line or if engines on the approach side are not running. Stop engines on that side by any means possible before approaching the crew compartment if restraint line is not available.
- Do not pull external emergency escape hatch jettison T-handle if any interior seat ejection handle is up. Ejection sequence could occur if either external emergency escape hatch jettison T-handle is pulled.
- Hatch jettison rocket blast could ignite fuel vapors.
- Do not pull external emergency escape hatch jettison T-handle if either crew member is out of the ejection seat.

1. ESCAPE HATCH JETTISON

NOTE:

Left side markings shown, right side similar. Battery disconnects are on right side only.

- Break emergency access panel.
- Pull T-handle out 10 feet to jettison hatch - stand clear.

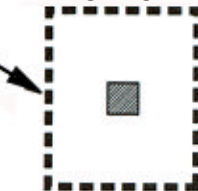


WARNING - THIS AIRCRAFT CONTAINS AN EMERGENCY ESCAPE SYSTEM EQUIPPED WITH EXPLOSIVE CHARGES. SEE TO -2 FOR COMPLETE INSTRUCTIONS

1a
EMERGENCY
ACCESS PANEL

EMERGENCY
BATTERY
DISCONNECTS
OTHER SIDE

EMERGENCY EXIT



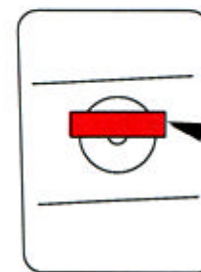
HATCH JETTISON



1. BREAK EMERGENCY ACCESS PANEL
2. PULL T-HANDLE OUT 10 FT TO JETTISON HATCH - STAND CLEAR

NOTE:

AF82-1066 shown
AF82-1067 similar

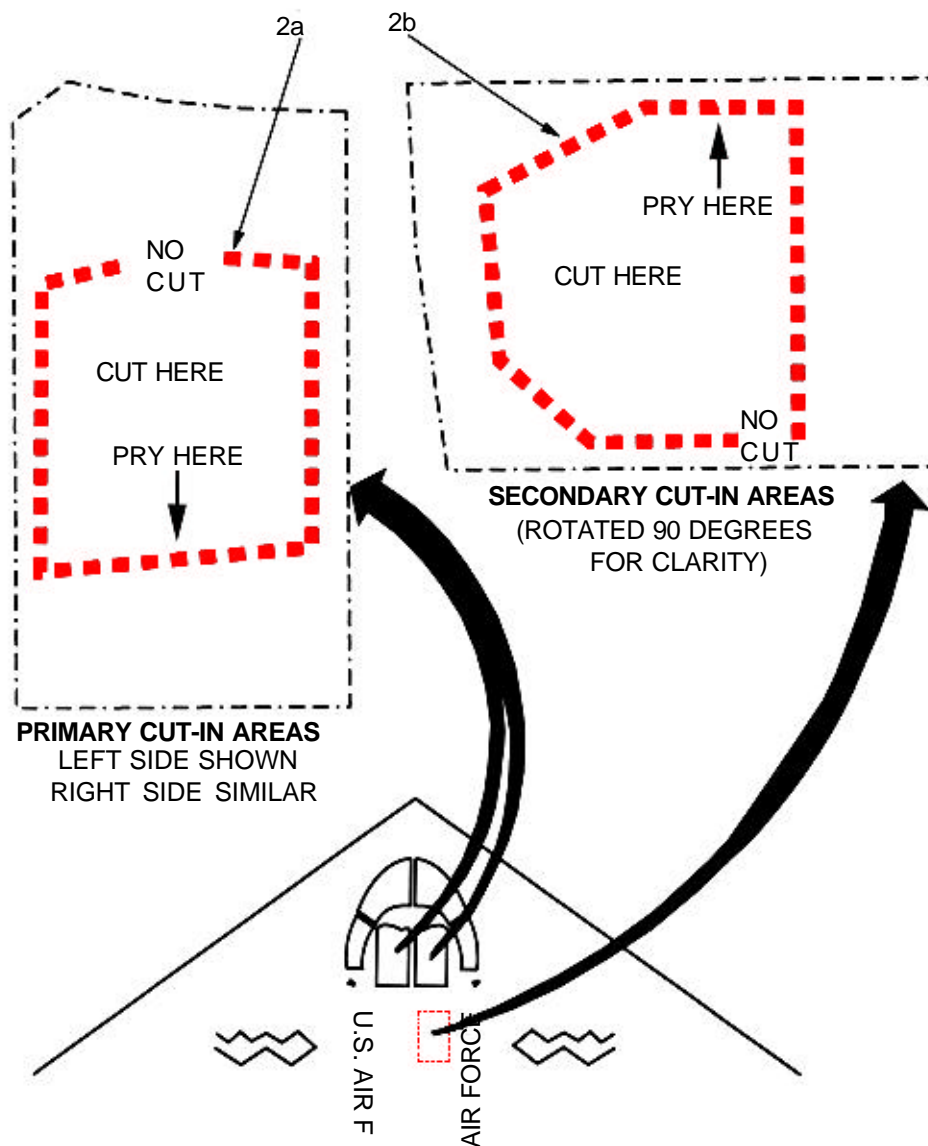


1b
JETTISON
T- HANDLE

EMERGENCY ENTRY - Continued

2. CUT-IN AREAS

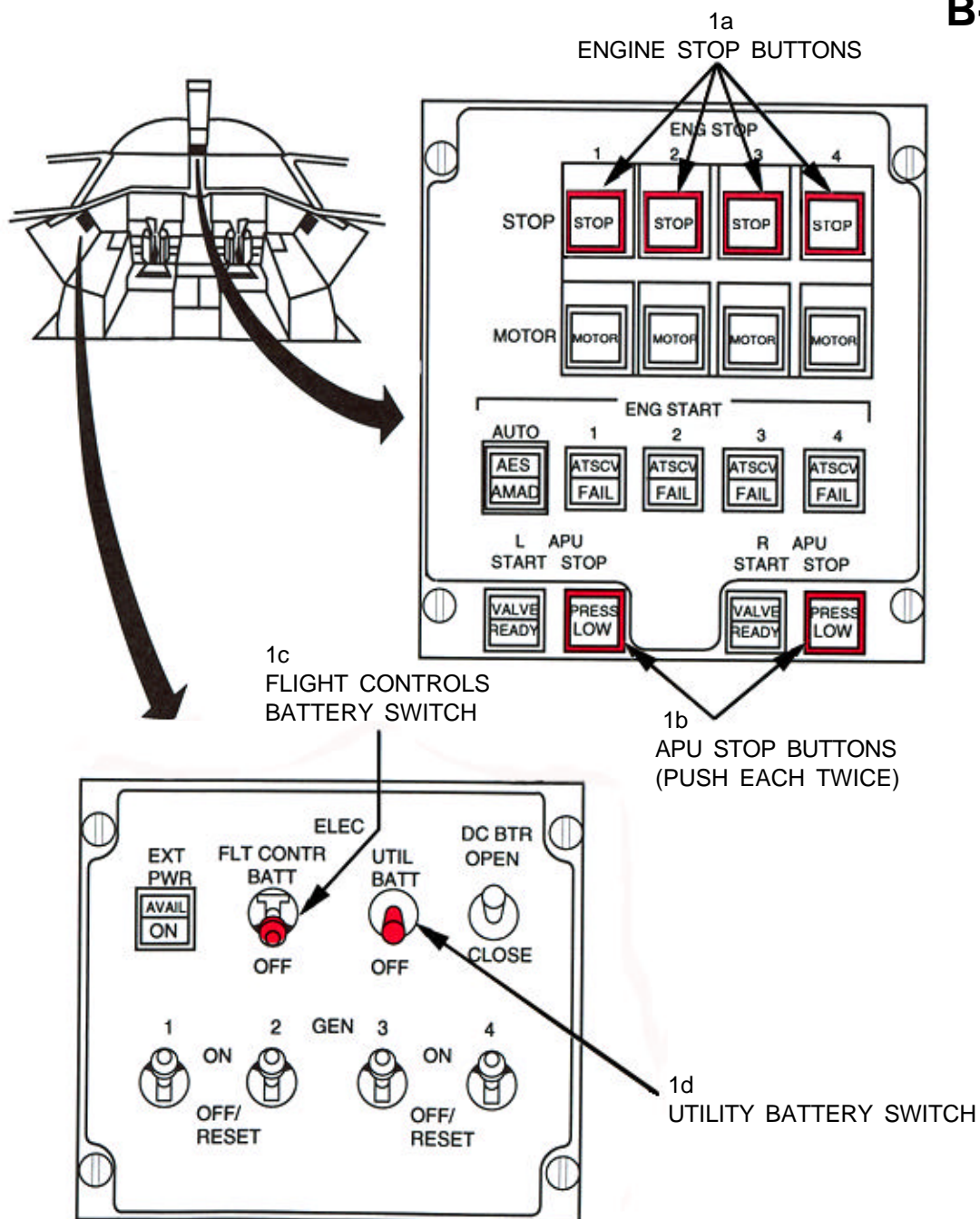
- a. Primary cut-in areas are on each of the two forward escape hatches. Use 5-inch cutting depth and remain within the cutting border.
- b. Secondary cut-in area approximately 3-1/2 feet aft of the right escape hatch. Use 5-inch cutting depth and remain within the cutting border.



ENGINE SHUTDOWN

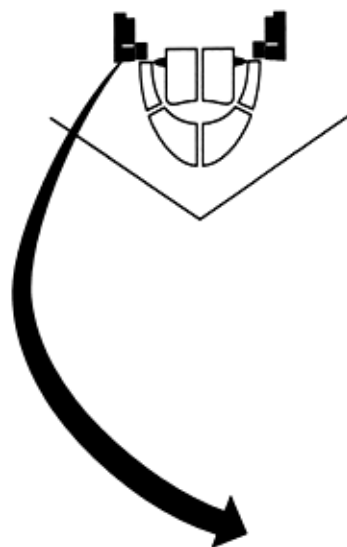
1. ENGINE SHUTDOWN

- Push ENG STOP buttons.
- Push each APU STOP button twice. If APU buttons are only pushed once, APU could run for two additional minutes.
- Place lever-locked FLT CONTR BATT switch to OFF.
- Place UTIL BATT switch to OFF.



BATTERY EMERGENCY DISCONNECTS

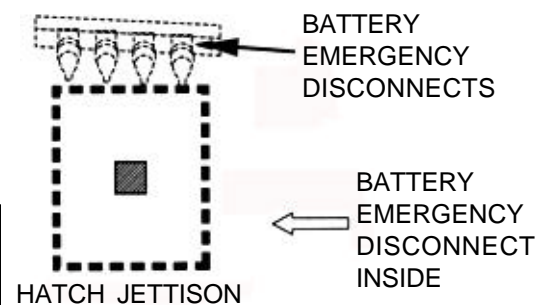
B-2



WARNING - THIS AIRCRAFT CONTAINS
AN EMERGENCY ESCAPE SYSTEM
EQUIPPED WITH EXPLOSIVE CHARGES.
SEE TO -2 FOR COMPLETE INSTRUCTIONS

**RESCUE**

1. BREAK EMERGENCY ACCESS PANEL
2. PULL T-HANDLE OUT 10 FT TO
JETTISON HATCH - STAND CLEAR



NOTE:
AF82-1066 shown
AF82-1067 similar

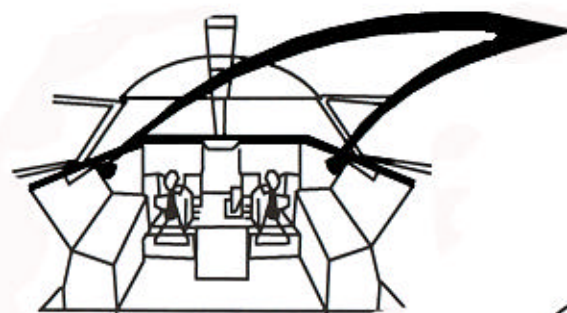
SAFETYING EJECTION SYSTEM AND AIRCREW EXTRACTION

1. SAFETYING EJECTION SYSTEM - BOTH SEATS

- Move the ejection handle safety lever on the left side of the seat to the forward/up position.
- Install ejection handle seat pin (PN C114767-1) in left ejection handle.
- Install safety pin (PN AN415-4) in interior emergency hatch jettison handle.

2. AIRCREW EXTRACTION - BOTH SEATS

- Release lap belt.
- Release left and right survival kit clips.
- Release left and right shoulder harness fittings.



1c
INTERIOR
EMERGENCY
HATCH
JETTISON
HANDLE
SAFETY PIN

2c
SHOULDER
HARNESS
FITTINGS
(LEFT & RIGHT)

2a
LAP BELT

2b
SURVIVAL
KIT CLIPS
(LEFT & RIGHT)

1b
EJECTION
CONTROL
HANDLE
SAFETY PIN
(INSTALL
INBOARD ONLY)

1a
EJECTION CONTROL HANDLE
GROUND SAFETY LEVER UP
(SAFE POSITION)

CREW
EJECTION
SEAT

B-2

RECOVERY SEQUENCER INDICATOR AND USE OF EMERGENCY LOWERING DEVICE (OPTIONAL)

B-2

1. RECOVERY SEQUENCER INDICATOR

WARNING

- Do not jettison escape hatches from inside the crew compartment. Rocket blast could cause death or injury to rescue personnel.
- A Seat Armed Indicator located on the upper right side of the seat can indicate WHITE for OK and RED for SEAT ARMED. This indicates that the Advanced Recovery Sequencer (ARS) battery condition is serviceable or expended. If expended, the white sealant will be punctured by a protruding red pin. If this is a recent condition, it will take two hours for the seat to be considered safe to work around or remove. Electrical battery power is required to energize the recovery sequencer circuits for the numerous explosives on the seat. Use extreme caution and judgement in this case. If time permits, call the local Egress Shop before proceeding. If emergency exists and time does not allow inspection by the Egress Shop, sever all exposed ballistic lines including top of seat for the rocket catapult.

NOTE:

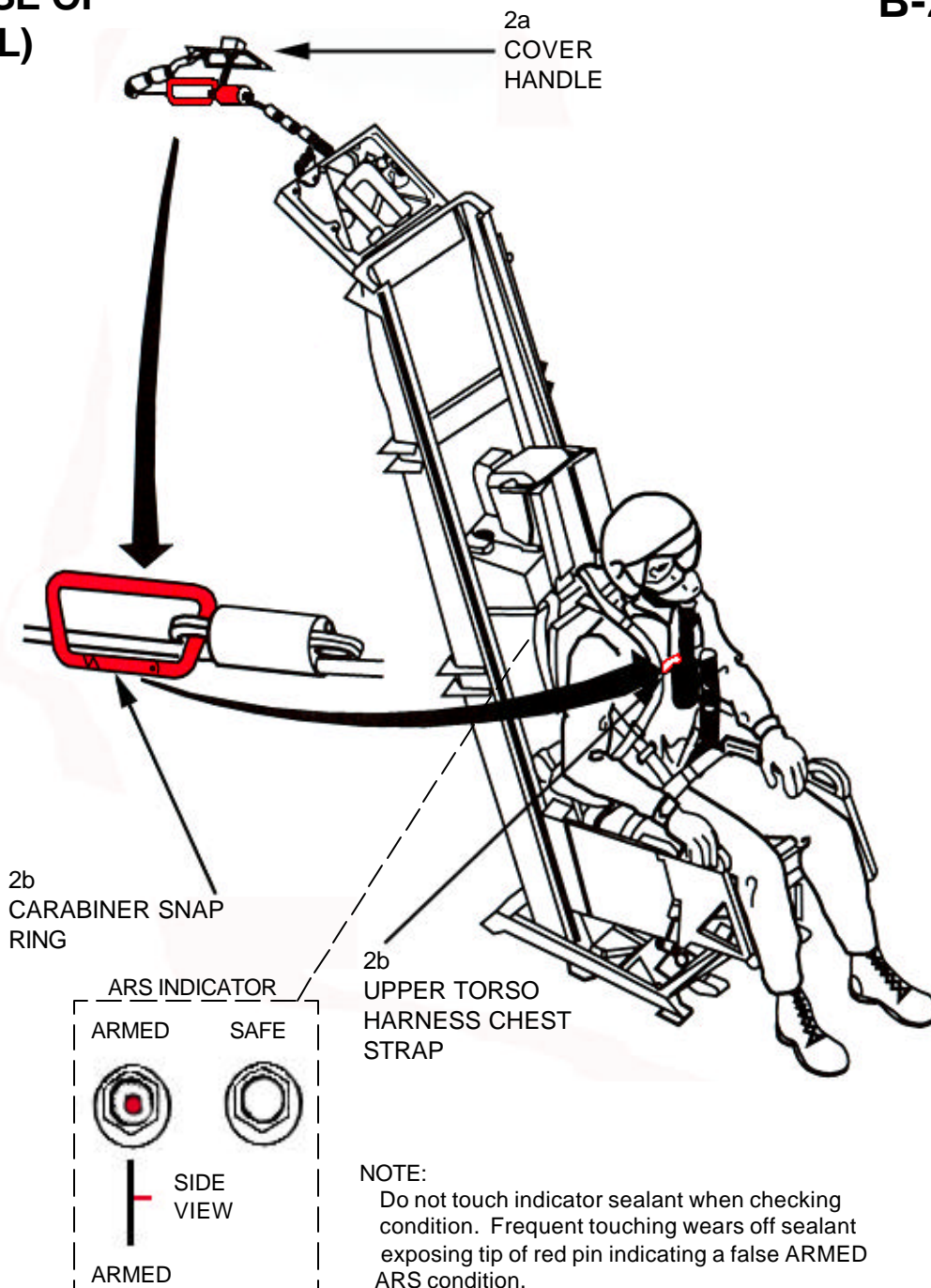
The escape hatches must have already been jettisoned from the aircraft to use the emergency lowering device.

2. ATTACH EMERGENCY LOWERING DEVICE

- Grasp cover handle and push center release button on handle to release cover. Pull emergency lowering device and rope clear of housing. Throw release cover and rope through hatch opening past aircraft leading edge.
- Attach carabiner snap ring to aircrew upper torso harness chest strap.

2. REMOVE AIRCREW

- Lower aircrew to ground, using emergency lowering device. The lowering device controls the descent.



AIRCRAFT PAINT SCHEME

B-52

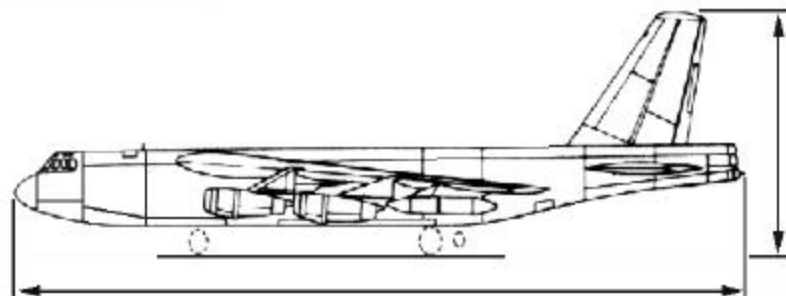


AIRCRAFT DIMENSIONS

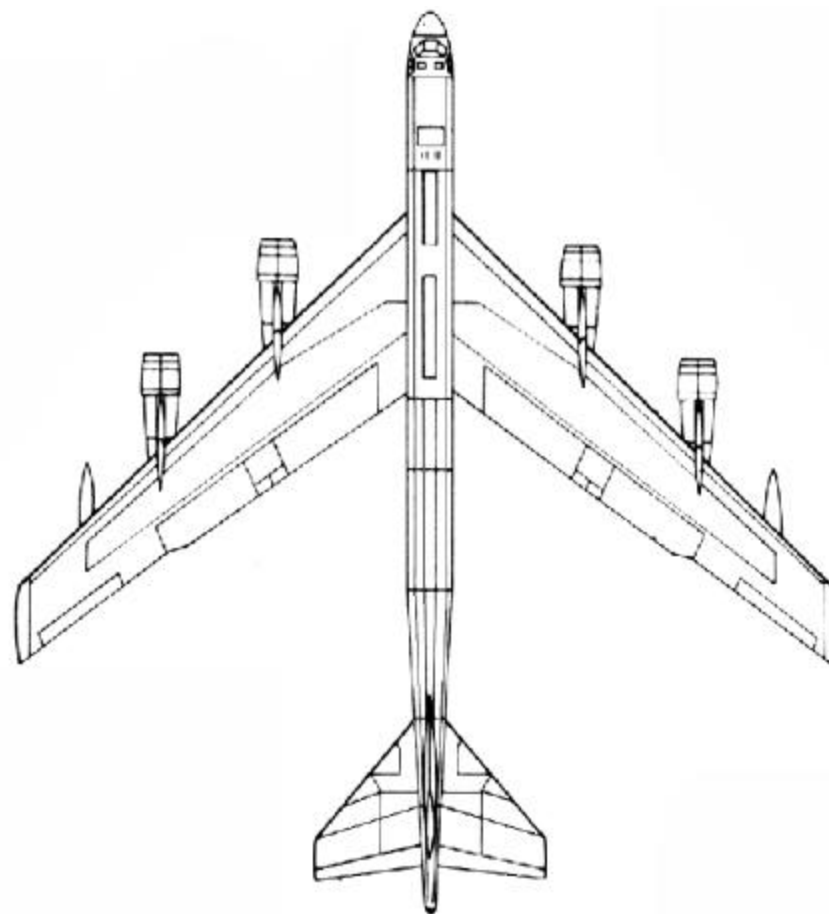
WING SPAN
185 FT 0 IN
56.38 M



HEIGHT
40 FT 8 IN
12.40 M



LENGTH
160 FT 10.9 IN
48.03 M



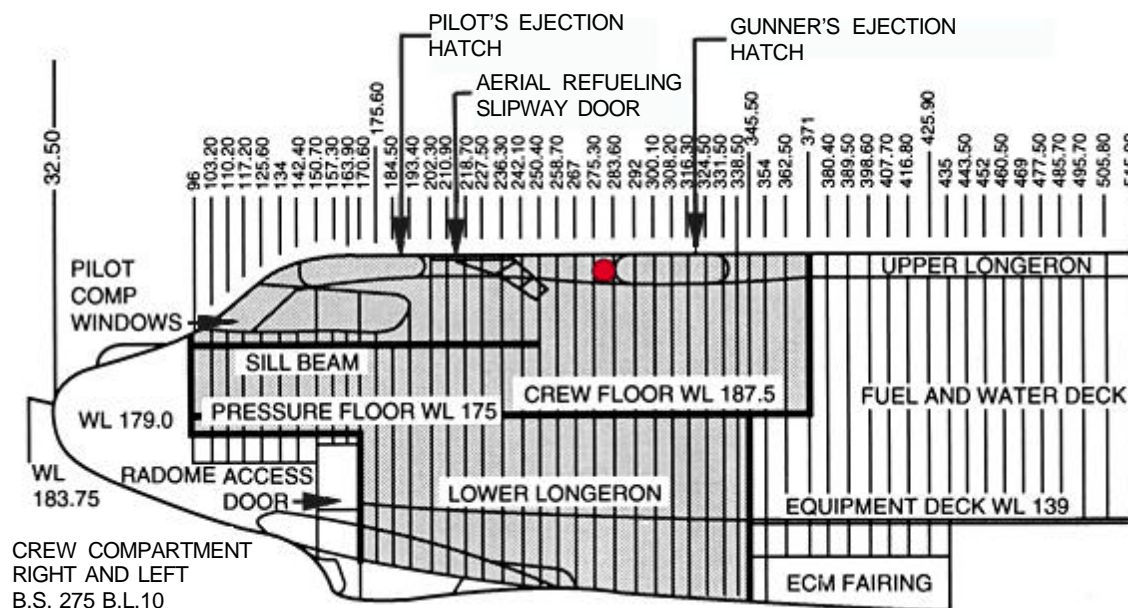
AIRCRAFT SKIN PENETRATION POINTS AND FIRE ACCESS LOCATIONS

B-52

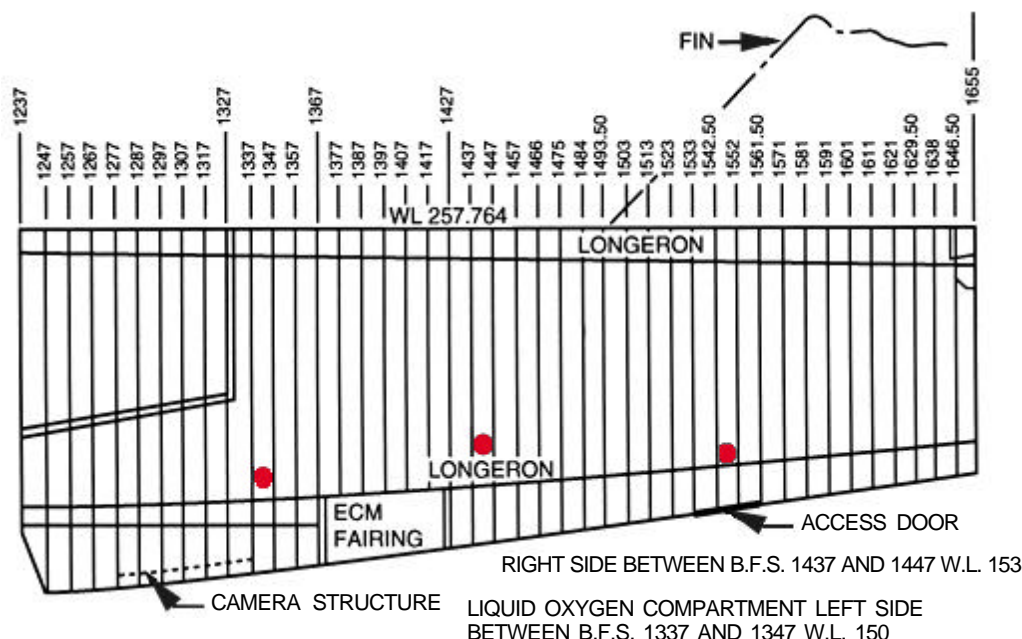
T.O. 00-105E-9

NOTE:

Penetration points adjacent on both sides of sextant installation immediately forward of ECM and Gunner hatches.

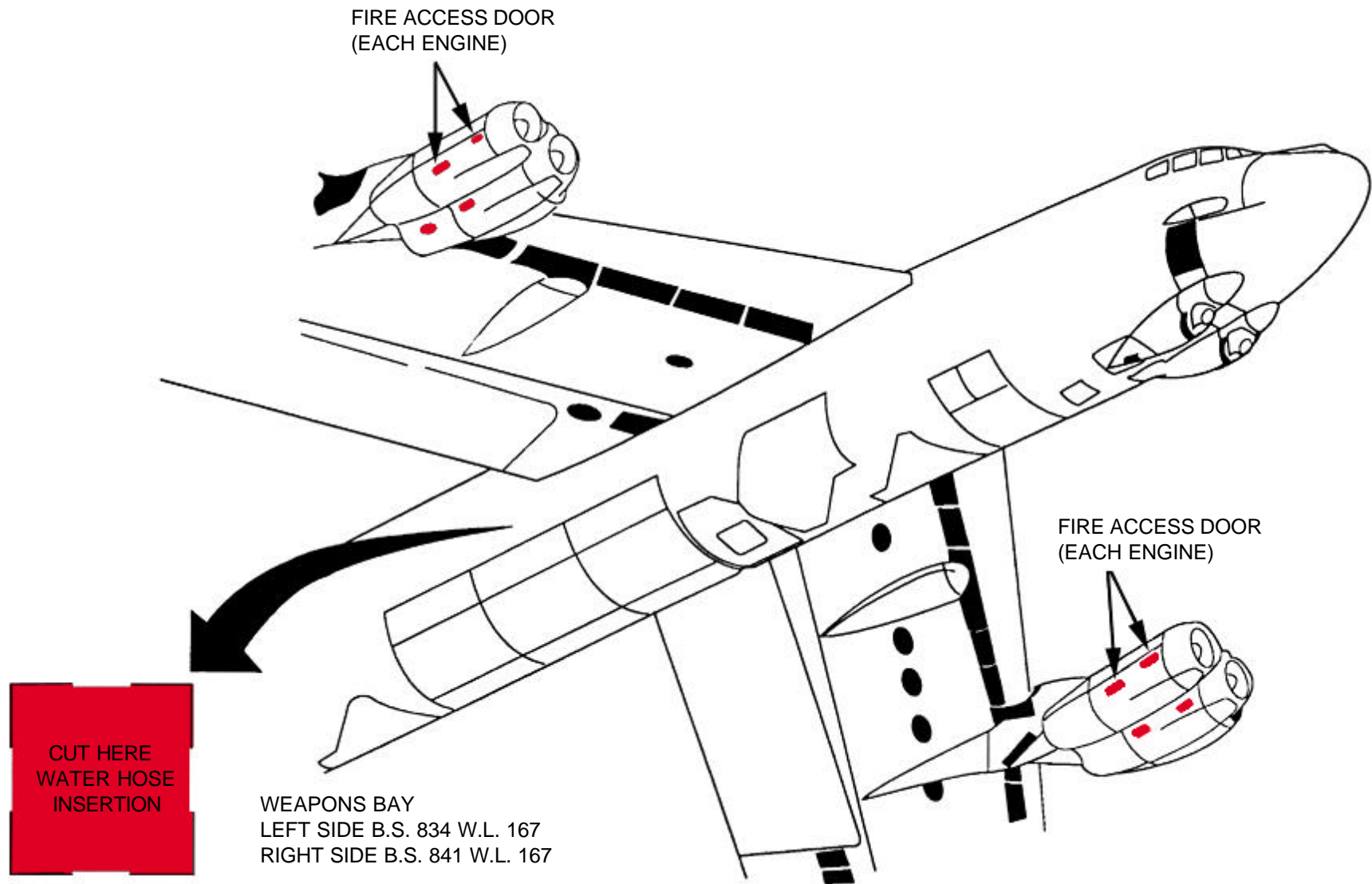


SECTION 47 AFT BAY BETWEEN
F.S. 1542.5 AND 1552 W.L. 160



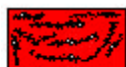
NOTE:

Penetration point is 9 inches above upper chord of lower longeron on both sides of the liquid oxygen compartment.



AIRCRAFT HAZARD INFORMATION

DANGER AREAS



MICROWAVE RADIATION

ENGINE AND STARTER TURBINE
WHEEL DISINTEGRATION

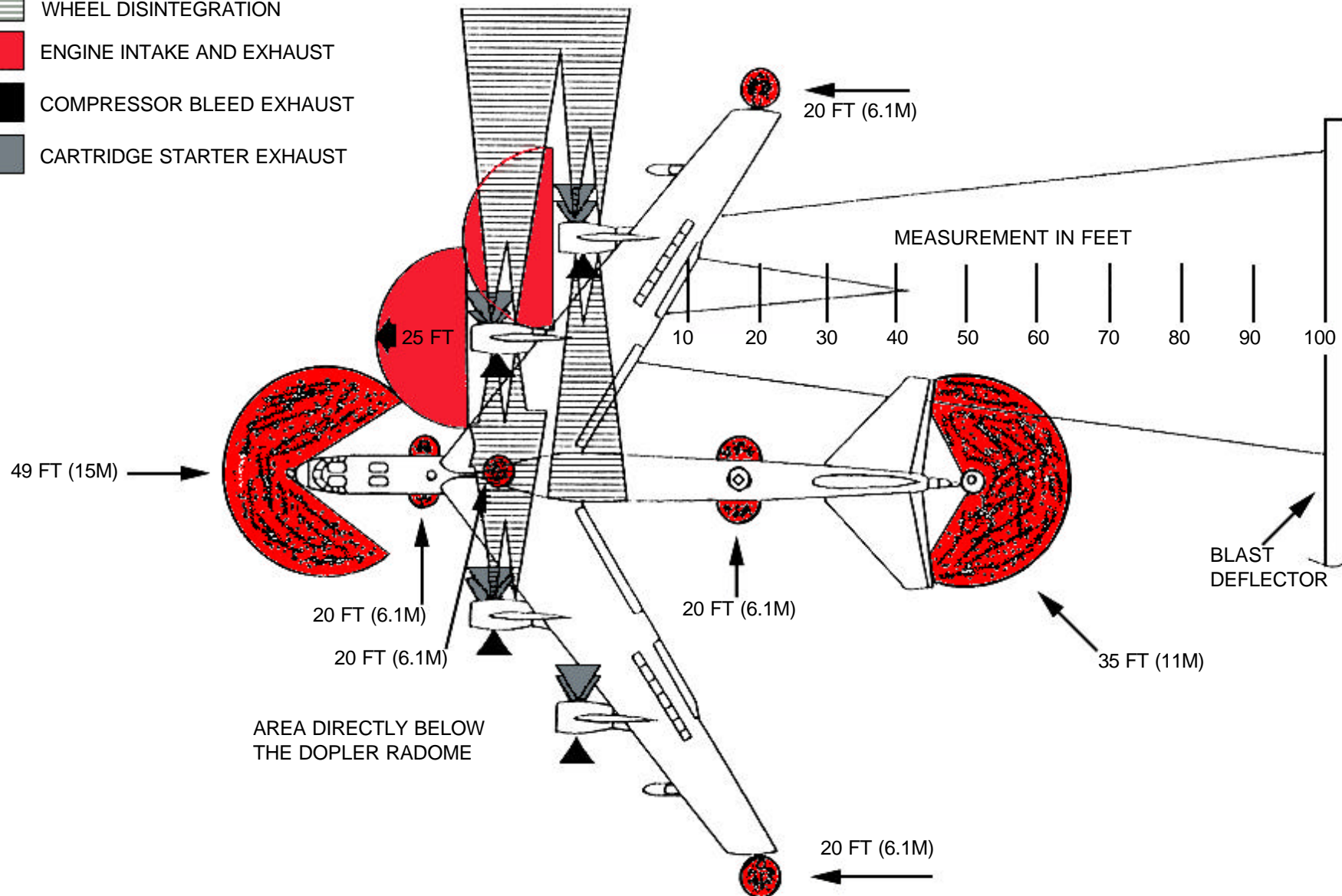
ENGINE INTAKE AND EXHAUST

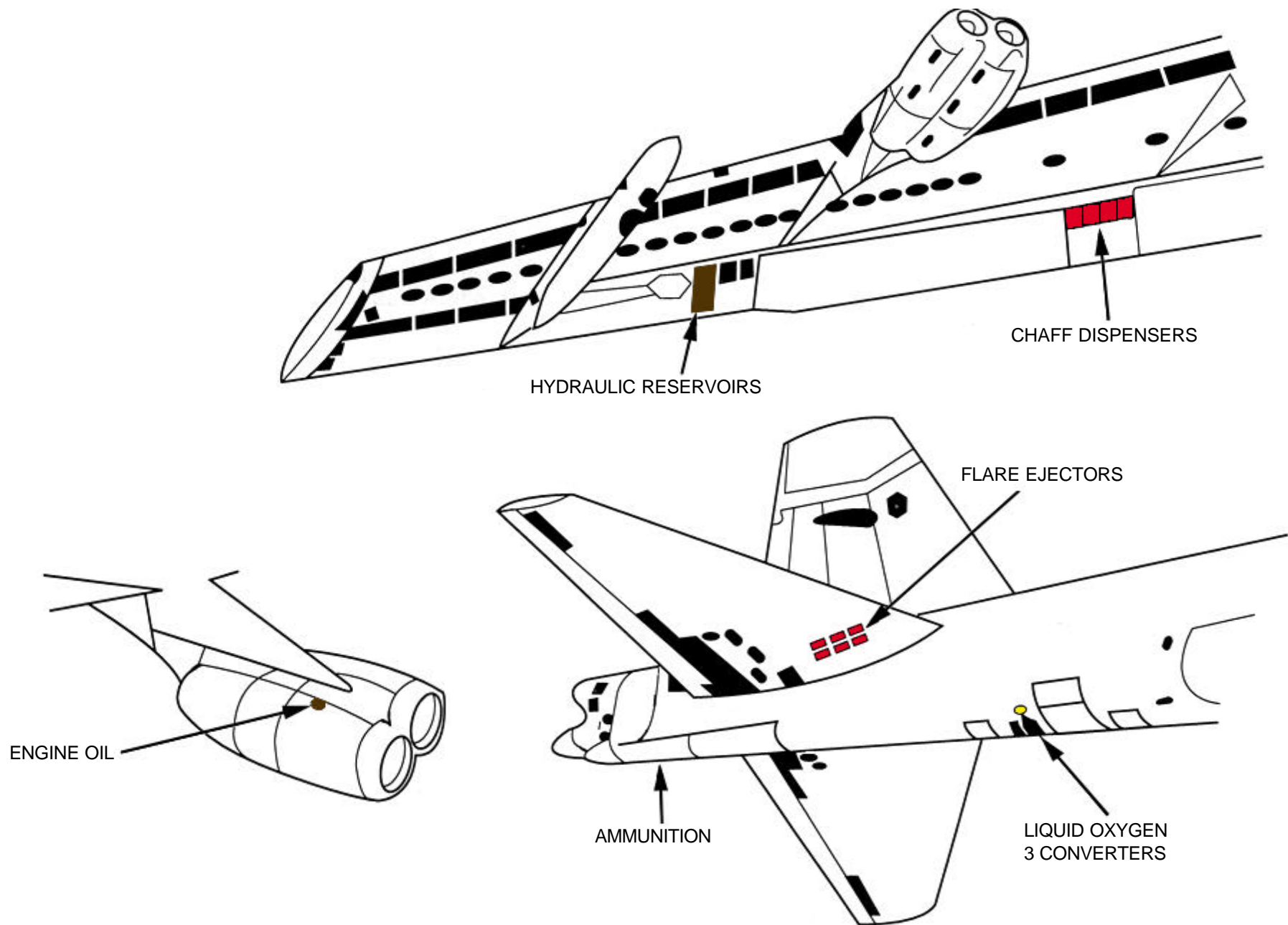


COMPRESSOR BLEED EXHAUST



CARTRIDGE STARTER EXHAUST





SPECIAL TOOLS/EQUIPMENT

Cowling Key
Disarming Tool
Rescue Harness (Local Mfg)
25 Foot Ladder
Fire Drill II

AIRCRAFT ENTRY B-52G/H MODELS

1. NORMAL ENTRY FORWARD COMPARTMENT
(Hatch located forward of landing gear.)

- a. Push release button in and pull handle down and open hatch.

2. EMERGENCY ENTRY FORWARD COMPARTMENT

NOTE:

Communicate with crew in order for the rescue crew to avoid being in the vicinity of a jettisoning or impacting hatch. Look through side windows to determine situation and condition of crew if communication can not be made.

WARNING

When a hatch is removed, the seat at that station will be armed and can be fired. Making entry through hatch should only be made as a last resort.

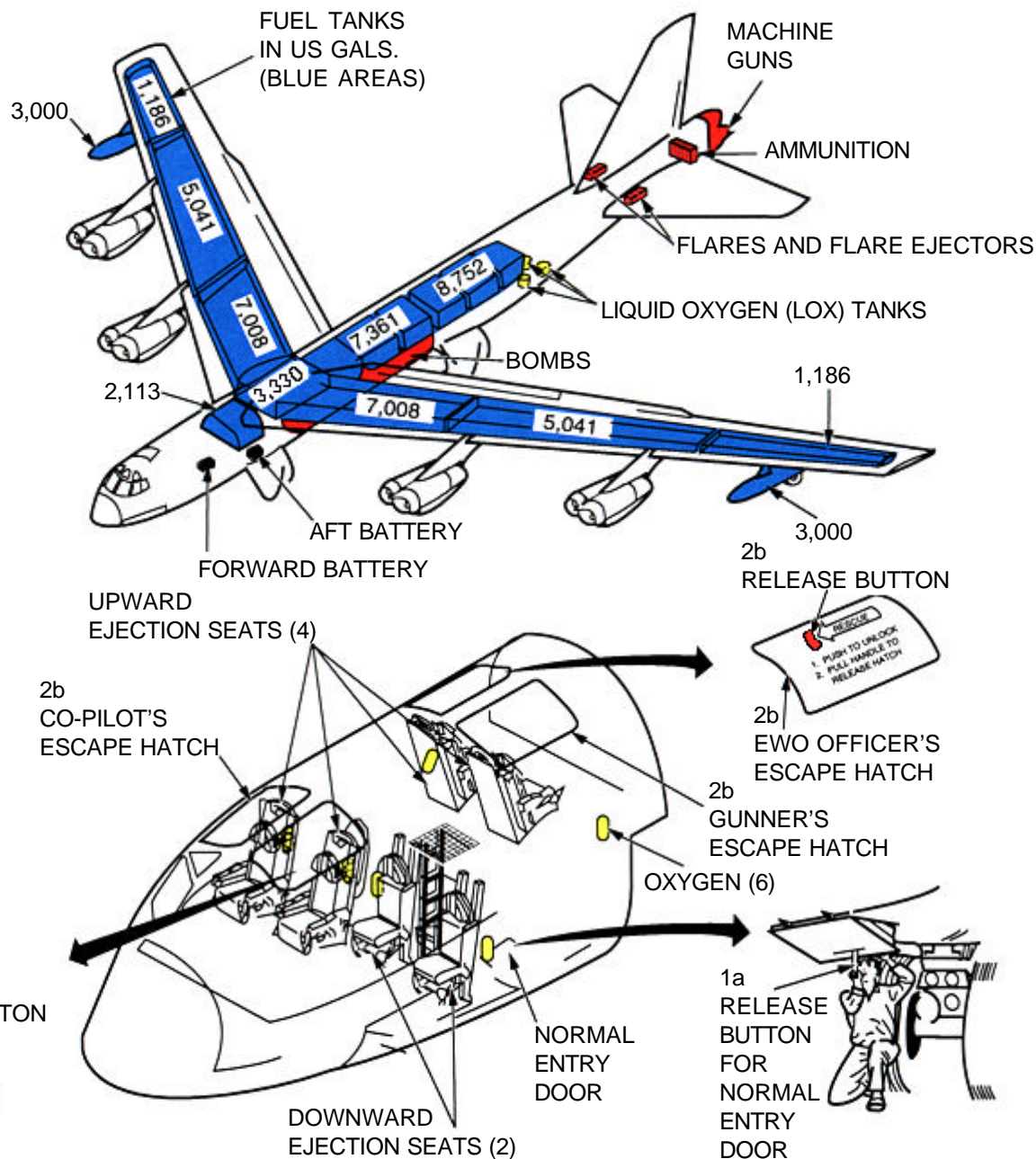
- a. If possible, make entry through side window and cut canopy jettison hatch hose and catapult hose.

NOTE:

Cut catapult hose on seat below top hatch(es) that entry was made through. Safety remaining ejection seats after engine shutdown.

- b. PILOT'S, CO-PILOT'S, EW OFFICER'S, and GUNNER'S ESCAPE HATCHES. Push release button in and pull handle up and open hatch.

- c. Lift and rotate aft until hatch disengages and separates from hinge points.



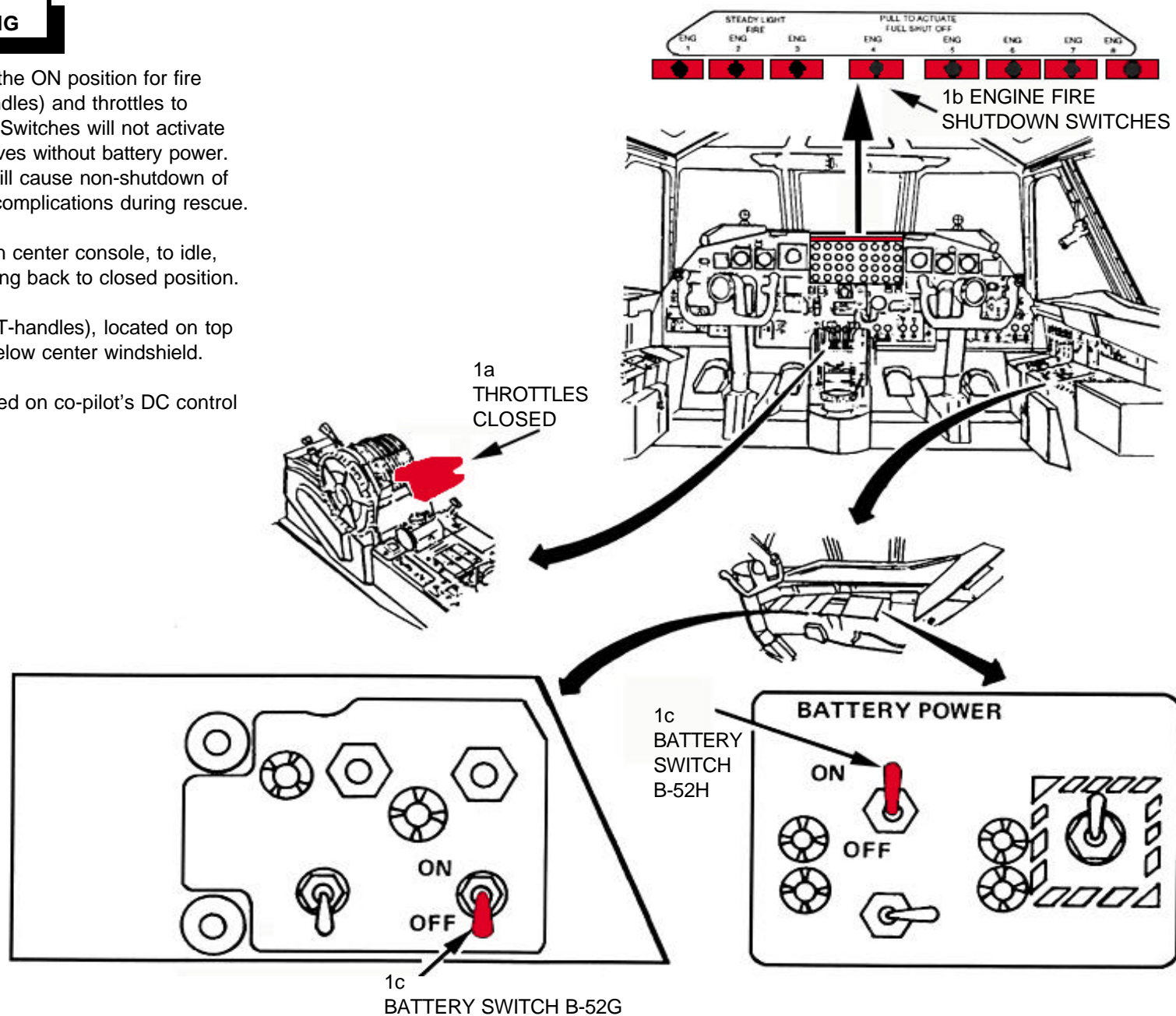
ENGINE SHUTDOWN

1. ENGINE SHUTDOWN

WARNING

Battery switch must be in the ON position for fire shutdown switches (T-handles) and throttles to close fuel shutoff valves. Switches will not activate agent release or close valves without battery power. Failure to heed warning will cause non-shutdown of engines and devastating complications during rescue.

- Retard throttles, located on center console, to idle, then raise throttles and bring back to closed position.
- Pull fire shutoff switches (T-handles), located on top center instrument panel below center windshield.
- Place battery switch, located on co-pilot's DC control panel, to OFF position.



SAFETYING EJECTION SYSTEM

1. NORMAL: UPWARD EJECTION SEATS

NOTE:

Flight status safety pins and streamers are stowed in pouches mounted on upper right side of seat bucket. Additional safety pins are in a box on the back of the pilot's seat. For EWO and Gunner, additional pins are located in the Ground Egress Panel Assembly to the side of these positions.

- a. Install Flight Status safety pins in both armrests of all four upward seats. Pins are ball lock pip pin type. Each seat is an independent system and not part of an integrated system.

NOTE:

Seats opposite of a station with a removed hatch should have seat armrests stowed. A release tab is located under the armrest telescoping assembly tube that will unlock allowing the armrest to be stowed. Push the release button and gently push the armrest downward.

2. EMERGENCY: UPWARD EJECTION SEATS

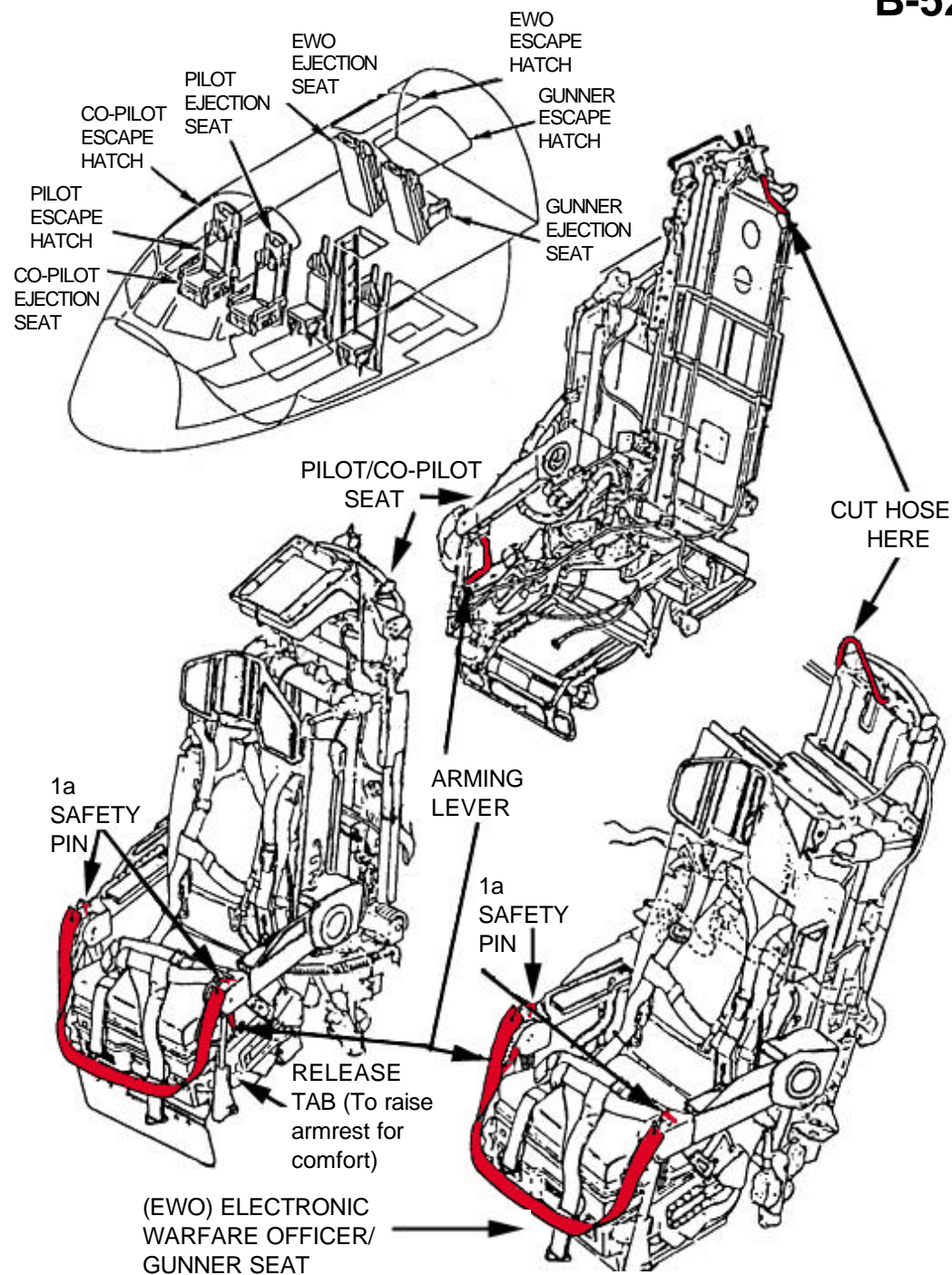
WARNING

Install safety pins on the Gunner, Nav, and Co-pilot's mechanically fired M-27 initiators to prevent inadvertent actuation. If hatches have been jettisoned and arming levers in the armrests are up and exposed, insure no objects are placed in the path of the armrest when being stowed or ejection seat will fire causing death to crew-member and possibly rescue personnel.

NOTE:

EWO and Gunner's hatch have a separate alternate hatch jettison T-handle mounted on their forward instrument panel.

- a. Cut catapult hose. This hose is routed from top of seat to catapult assembly. The catapult is located on the back center of the seat. Cut metal braided hose where hose connects to exhaust port of catapult safety pin pull initiator to disable catapult and prevent accidental ejection.



SAFETYING EJECTION SYSTEM - Continued

3. NORMAL: DOWNWARD EJECTION SEATS

WARNING

Ejection Control D-ring must be in the stowed position prior to installing flight status safety pin.

- Stow ejection seat D-ring and install flight status safety pins. Pin is a ball lock pip pin type.
- If safety pins cannot be located, rotate D-ring forward and down and pull up on ejection control trigger ring release mechanism pin to lock Ejection Control D-ring down.

NOTE:

Inadvertent actuation of ankle restraints does not actuate any explosives.

4. EMERGENCY: DOWNWARD EJECTION SEATS

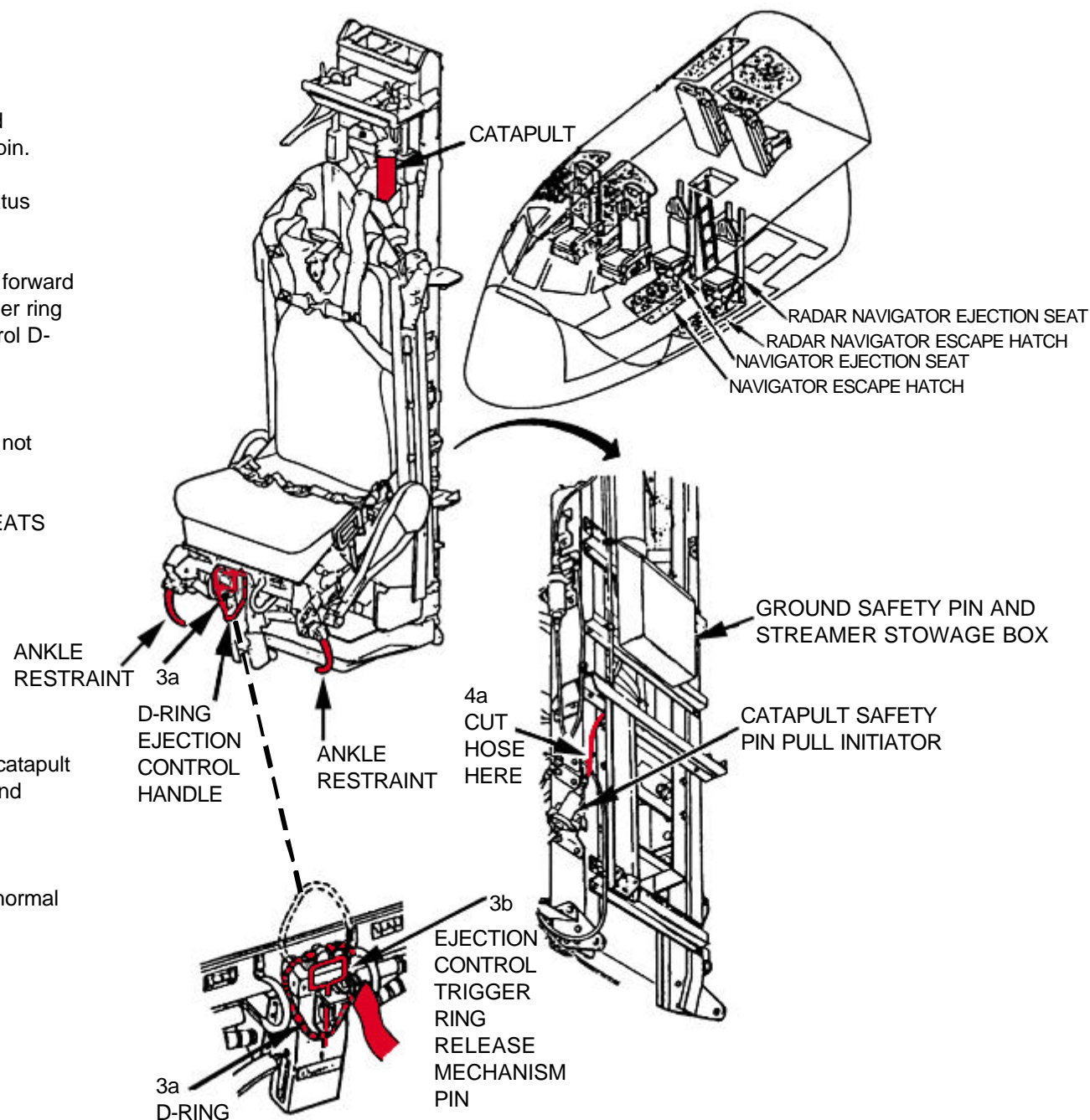
WARNING

Should a downward ejection hatch be inadvertently jettisoned or removed, the ejection seat at that station will be armed and can be ejected.

- If hatch has been jettisoned or removed, cut catapult hose at any point between catapult initiator and catapult.

NOTE:

If hatch has not been jettisoned or removed, normal safetying procedures may be used.



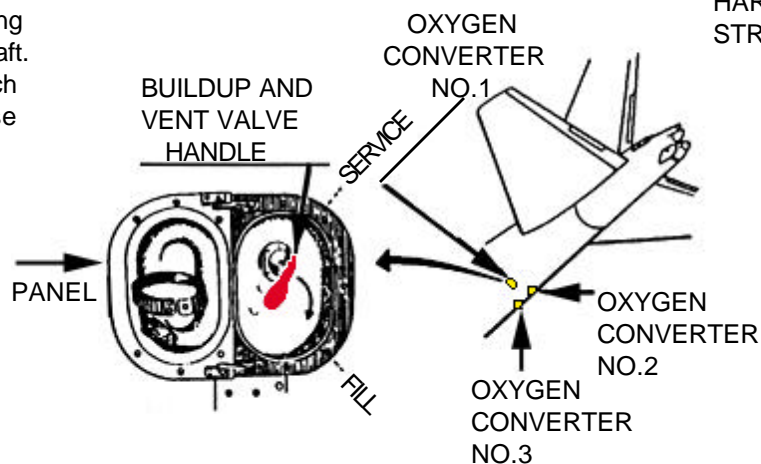
AIRCREW EXTRACTION

1. AIRCREW EXTRACTION

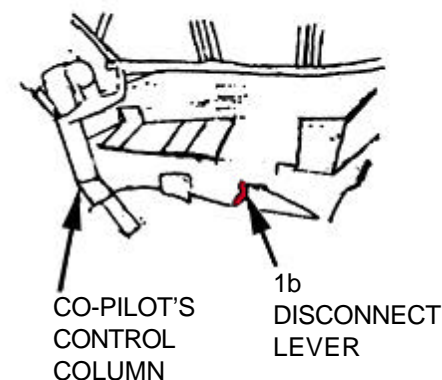
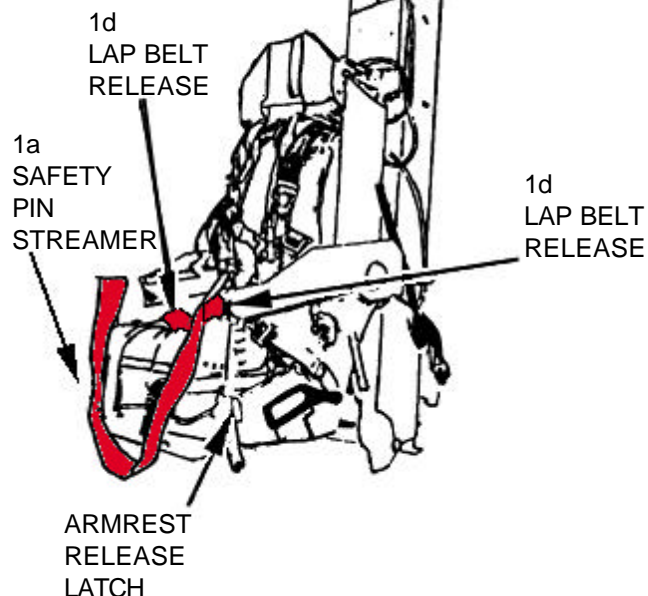
- Cut safety pin streamers in half to prevent entanglement.
- Stow pilot's and copilot's control columns by pressing down on disconnect lever, located on lower portion of pilot's and copilot's side panels, push columns forward.
- If ankle restraints on downward seats have been actuated, restow by pushing downward and outward on ankle restrain until the pivot arms and restraints are restowed and locked.
- Rotate lap belt release mechanism, to release lap belt.
- Disconnect the parachute harness chest strap and two leg straps.
- Remove crewmembers from seats.

NOTE:

Oxygen system can be vented by opening three vent valves at the rear of the aircraft. Open each of the panels and rotate each converter vent valve handle 90° clockwise from service position to the fill position.



TYPICAL UPWARD SEAT



TYPICAL DOWNWARD SEAT

